

Cover Page

Order ID : Q3434

Project ID : AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206

Client : AECOM

Lab Sample Number

Q3434-01
Q3434-02
Q3434-03

Client Sample Number

PR132-WC1-20251022
PR132-WC2-20251022
TB

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : _____

Date: 11/5/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012



284 Sheffield Street, Mountainside, NJ 07092
Phone: 908 789 8900 Fax: 908 789 8922

CASE NARRATIVE

AECOM

Project Name: AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206

Project # N/A

Order ID # Q3434

Test Name: TPH GC

A. Number of Samples and Date of Receipt:

1 Solid sample was received on 10/22/2025.

B. Parameters

According to the Chain of Custody document, the following analyses were requested: TPH GC. This data package contains results for TPH GC.

C. Analytical Techniques:

The analysis were performed on instrument FID_F. The column is RXI-1MS which is 20 meters, 0.18mm ID, 0.18 um df, catalog 13302. The analysis of TPH GC was based on method 8015D and extraction was done based on method 3541.

D. QA/ QC Samples:

The Holding Times were met for all analysis.

The Surrogate recoveries were met for all analysis.

The Retention Times were met for all analysis.

The MS recoveries met the requirements for all compounds.

The MSD recoveries met the requirements for all compounds.

The RPD were met for all analysis.

The Blank Spike met requirements for all compounds.

The Blank analysis did not indicate the presence of lab contamination.

The Initial Calibration met the requirements.

The Continuous Calibration met the requirements.

E. Additional Comments:

The soil samples results are based on a dry weight basis.

F. Manual Integration Comments:

Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed



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above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature_____

DATA REPORTING QUALIFIERS- ORGANIC

For reporting results, the following “Results Qualifiers” are used:

Value	If the result is a value greater than or equal to the detection limit, report the value
U	Indicates the compound was analyzed for but was not detected. Report the minimum detection limit for the sample with the U, i.e. “10 U”. This is not necessarily the instrument detection limit attainable for this particular sample based on any concentration or dilution that may have been required.
ND	Indicates the analyte was analyzed for, but not detected
J	Indicates an estimated value. This flag is used: (1) When estimating a concentration for a tentatively identified compound (library search hits, where a 1:1 response is assumed.) (2) When the mass spectral data indicated the identification, however the result was less than the specified detection limit greater than zero. If the detection limit was 10ug/L and a concentration of 3 ug/L was calculated report as 3 J. This flag is used when similar situation arise on any organic parameter i.e. Pest, PCB and others.
B	Indicates the analyte was found in the blank as well as the sample report as “12 B”.
E	Indicates the analyte ‘s concentration exceeds the calibrated range of the instrument for that specific analysis.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.
P	This flag is used for Pesticide/PCB target analyte when there is >25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form 1 and flagged with a “P”.
N	This flag indicates presumptive evidence of a compound. This is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It applies to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the flag is not used.
A	This flag indicates that a Tentatively Identified Compound is a suspected aldol-condensation product.
Q	Indicates the LCS did not meet the control limits requirements



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GC ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY

ORDER ID: Q3434

MATRIX: Solid

METHOD: 8015D/3541

	NA	NO	YES
1. Chromatograms Labeled/Compounds Identified.			✓
2. Standard Summary Submitted.			✓
3. Calibration - Initial Calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours of sample analysis, 12 HOURS IF 8000 SERIES METHOD. The Initial Calibration met the requirements. The Continuous Calibration met the requirements.			✓
4. Blak Contamination - If yes, list compounds and concentrations in each blank:		✓	
5. Surrogate Recoveries Meet Criteria If not met, list those compounds and their recoveries which fall outside the acceptable ranges.			✓
6. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria If not met, list those compounds and their recoveries which fall outside the acceptable range. The MS recoveries met the requirements for all compounds. The MSD recoveries met the requirements for all compounds. The Blank Spike met requirements for all compounds. The RPD were met for all analysis.			✓
7. Retention Time Shift Meet Criteria (if applicable) Comments:			✓
8. Extraction Holding Time Met If not met, list number of days exceeded for each sample:			✓
9. Analysis Holding Time Met If not met, list those compounds and their recoveries which fall outside the acceptable range.			✓



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GC ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY (CONTINUED)

NA NO YES

ADDITIONAL COMMENTS:

The soil samples results are based on a dry weight basis.

QA REVIEW

Date

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: Q3434

Completed

For thorough review, the report must have the following:

GENERAL:

Are all original paperwork present (chain of custody, record of communication,airbill, sample management lab chronicle, login page)

✓

Check chain-of-custody for proper relinquish/return of samples

✓

Is the chain of custody signed and complete

✓

Check internal chain-of-custody for proper relinquish/return of samples /sample extracts

✓

Collect information for each project id from server. Were all requirements followed

✓

COVER PAGE:

Do numbers of samples correspond to the number of samples in the Chain of Custody on login page

✓

Do lab numbers and client Ids on cover page agree with the Chain of Custody

✓

CHAIN OF CUSTODY:

Do requested analyses on Chain of Custody agree with form I results

✓

Do requested analyses on Chain of Custody agree with the log-in page

✓

Were the correct method log-in for analysis according to the Analytical Request and Chain of Custody

✓

Were the samples received within hold time

✓

Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle

✓

ANALYTICAL:

Was method requirement followed?

✓

Was client requirement followed?

✓

Does the case narrative summarize all QC failure?

✓

All runlogs and manual integration are reviewed for requirements

✓

All manual calculations and /or hand notations verified

✓

QA Review Signature: SOHIL JODHANI

Date: 11/05/2025

LAB CHRONICLE

OrderID:	Q3434	OrderDate:	10/22/2025 1:40:00 PM
Client:	AECOM	Project:	AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206
Contact:	Rob Forstner	Location:	D41,VOA Ref. #2 Soil,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q3434-01	PR132-WC1-2025102 2	SOIL			10/22/25			10/22/25
			Pesticide-TCL	8081B		10/23/25	10/23/25	
			TPH GC	8015D		10/29/25	10/30/25	
Q3434-02	PR132-WC2-2025102 2	WATER			10/22/25			10/22/25
			Pesticide-TCL	8081B		10/28/25	10/28/25	



QC SUMMARY



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
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SOIL TPH GC SURROGATE RECOVERY

Lab Name: Alliance

Client: AECOM

Lab Code: ACE

SDG No.: Q3434

CLIENT ID	S1	S2	S3	S4	TOT
	TETRACOSANE-d50				OUT
PIBLK-FF016631.D	90				0
PIBLK-FF016641.D	93				0
PB170324BL	81				0
PB170324BS	92				0
PR132-WC1-20251022	54				0
WASTEMS	56				0
WASTEMSD	56				0

QC LIMITS

TETRACOSANE-d50

For Water : 29-130

For Soil : 37-130

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogate Diluted Out

SOIL TPH GC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Alliance

Client: AECOM

Lab Code: ACE

SDG No: Q3434

Client Sample ID : WASTEMS

Datafile: FF016638.D

COMPOUND	SPIKE ADDED ug/kg	SAMPLE CONCENTRATION ug/kg	MS/MSD CONCENTRATION ug/kg	% REC	Qual	QC LIMITS(%)
Petroleum Hydrocarbons	12967	83100	93000	76%		68-131

SOIL TPH GC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name:	<u>Alliance</u>	Client:	<u>AECOM</u>
Lab Code:	<u>ACE</u>	SDG No:	<u>Q3434</u>
Client Sample ID :	<u>WASTEMSD</u>	Datafile:	<u>FF016639.D</u>

COMPOUND	SPIKE ADDED ug/kg	SAMPLE CONCENTRATION ug/kg	MS/MSD CONCENTRATION ug/kg	% REC	Qual	QC LIMITS(%)
Petroleum Hydrocarbons	12971	83100	92000	69%		68-131

MS/MSD % Recovery RPD : 10.6

SOIL TPH GC LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE RECOVERY

Lab Name: Alliance

Client: AECOM

Lab Code: ACE

SDG No: Q3434

Client Sample ID : PB170324BS

Datafile: FF016635.D

COMPOUND	SPIKE ADDED ug/kg	CONCENTRATION ug/kg	LCS/LCSD CONCENTRATION ug/kg	% REC	QC LIMITS (%)
Petroleum Hydrocarbons	11322	0	11326	100	68-131

4B
METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

PB170324BL

Lab Name: Alliance

Contract: AECO02

Lab Code: ACE

SDG NO.: Q3434

Lab File ID: FF016634.D

Lab Sample ID: PB170324BL

Instrument ID: ff

Date Extracted: 10/30/2025

Matrix: (soil/water) Soil

Date Analyzed: 10/30/25

Level: (low/med) low

Time Analyzed: 12:22

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
PB170324BS	PB170324BS	FF016635.D	10/30/25
PR132-WC1-20251022	Q3434-01	FF016636.D	10/30/25
WASTEMS	Q3474-01MS	FF016638.D	10/30/25
WASTEMSD	Q3474-01MSD	FF016639.D	10/30/25

COMMENTS: _____



SAMPLE DATA

Report of Analysis

Client:	AECOM		Date Collected:	10/22/25
Project:	AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206		Date Received:	10/22/25
Client Sample ID:	PR132-WC1-20251022		SDG No.:	Q3434
Lab Sample ID:	Q3434-01		Matrix:	SOIL
Analytical Method:	8015D TPH		% Solid:	57.9
Sample Wt/Vol:	30.06 g	Final Vol:	1 mL	Test:
Prep Method:	SW3541	Prep Date	10/29/25	TPH GC

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS									
PHC	Petroleum Hydrocarbons	39700		1	662	4880	ug/kg	10/30/25 13:21	PB170324
SURROGATES									
16416-32-3	TETRACOSANE-d50	10.9			37 - 130	54%	SPK: 20		

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF103025\
Data File : FF016636.D
Signal(s) : FID2B.ch
Acq On : 30 Oct 2025 13:21
Operator : YP\AJ
Sample : Q3434-01
Misc :
ALS Vial : 33 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
PR132-WC1-20251022

Integration File: autoint1.e
Quant Time: Oct 31 02:21:10 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
Quant Title :
QLast Update : Wed Oct 29 12:48:52 2025
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.056	1134151	10.856 ug/ml
Target Compounds			

(f)=RT Delta > 1/2 Window

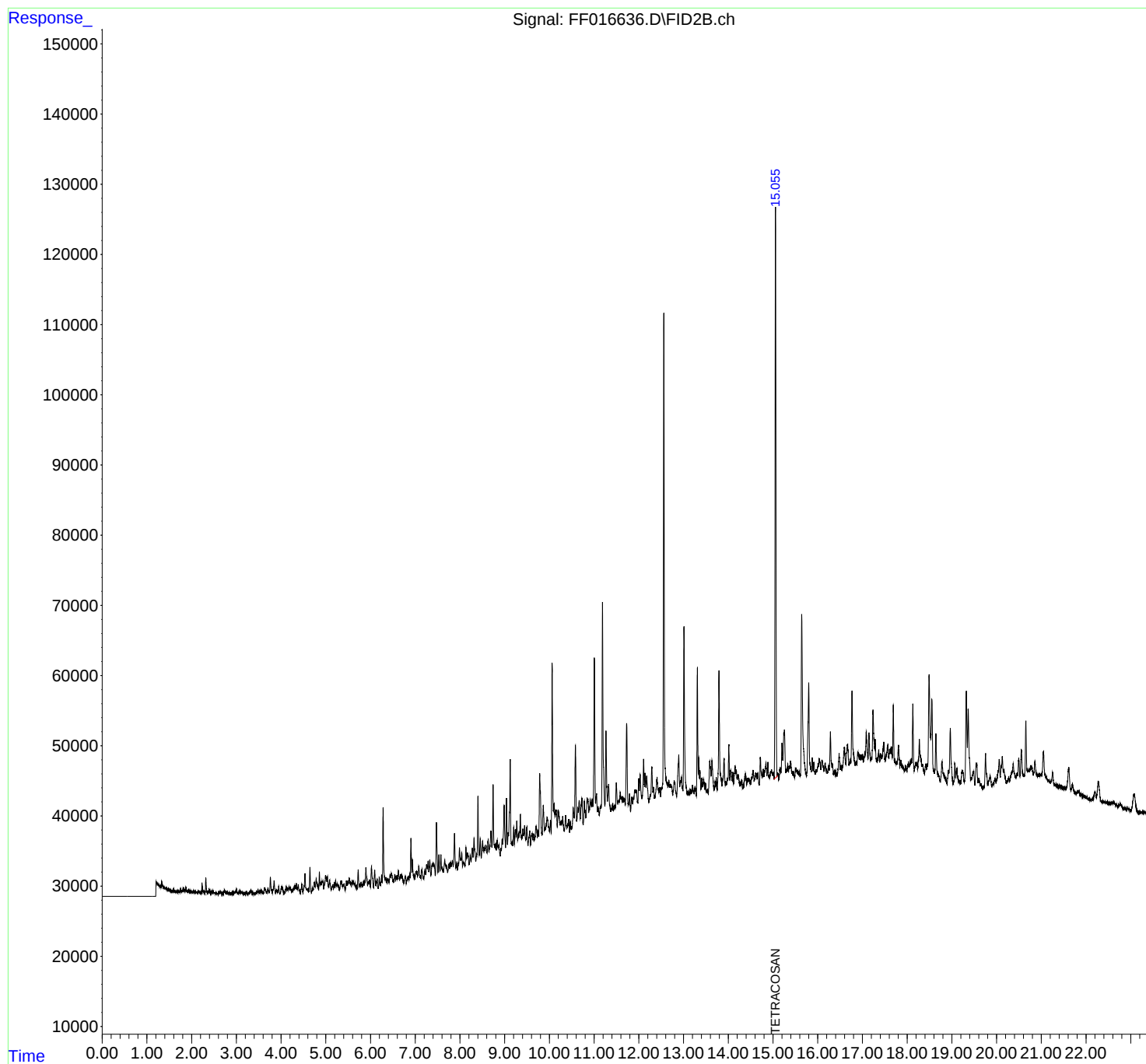
(m)=manual int.

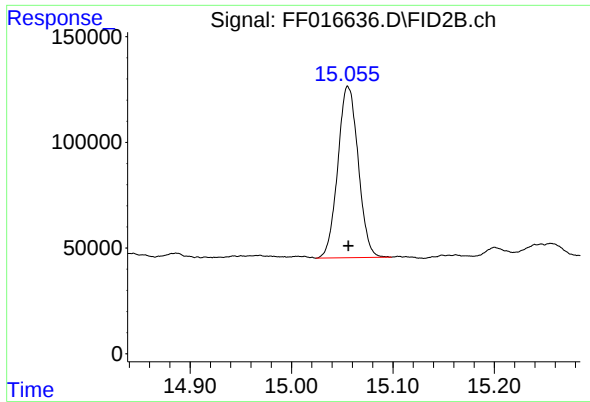
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF103025\
Data File : FF016636.D
Signal(s) : FID2B.ch
Acq On : 30 Oct 2025 13:21
Operator : YP\AJ
Sample : Q3434-01
Misc :
ALS Vial : 33 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
PR132-WC1-20251022

Integration File: autoint1.e
Quant Time: Oct 31 02:21:10 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
Quant Title :
QLast Update : Wed Oct 29 12:48:52 2025
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um





#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 15.056 min
Delta R.T.: 0.000 min
Response: 1134151
Conc: 10.86 ug/ml

Instrument :
FID_F
ClientSampleId :
PR132-WC1-20251022

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF103025\
 Data File : FF016636.D
 Signal(s) : FID2B.ch
 Acq On : 30 Oct 2025 13:21
 Sample : Q3434-01
 Misc :
 ALS Vial : 33 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
 Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	1.924	1.900	1.945	BV	252	2180	0.14%	0.003%
2	1.949	1.945	1.965	PV	81	531	0.03%	0.001%
3	1.984	1.965	2.020	VV	218	3110	0.20%	0.004%
4	2.047	2.020	2.070	PV	274	4333	0.28%	0.006%
5	2.074	2.070	2.107	VV	177	2263	0.15%	0.003%
6	2.109	2.107	2.133	VV	170	1686	0.11%	0.002%
7	2.136	2.133	2.151	VV	142	1180	0.08%	0.002%
8	2.155	2.151	2.165	VV	114	837	0.05%	0.001%
9	2.171	2.165	2.181	VV	141	1016	0.07%	0.001%
10	2.194	2.181	2.222	VV	115	2193	0.14%	0.003%
11	2.232	2.222	2.295	VV	1505	20073	1.30%	0.027%
12	2.318	2.295	2.356	VV	2230	26864	1.74%	0.036%
13	2.386	2.356	2.397	VV	425	7940	0.51%	0.011%
14	2.405	2.397	2.433	VV	484	5181	0.34%	0.007%
15	2.452	2.433	2.470	VV	328	4157	0.27%	0.006%
16	2.484	2.470	2.513	VV	469	6440	0.42%	0.009%
17	2.517	2.513	2.542	VV	160	2085	0.13%	0.003%
18	2.552	2.542	2.585	VV	144	2257	0.15%	0.003%
19	2.618	2.585	2.624	PV	379	4160	0.27%	0.006%
20	2.630	2.624	2.674	VV	337	6135	0.40%	0.008%
21	2.698	2.674	2.709	PV	171	2473	0.16%	0.003%
22	2.739	2.709	2.767	VV	588	12443	0.81%	0.017%
23	2.772	2.767	2.787	VV	248	2337	0.15%	0.003%
24	2.802	2.787	2.826	VV	331	4239	0.27%	0.006%
25	2.846	2.826	2.872	VV	205	3570	0.23%	0.005%
26	2.884	2.872	2.907	VV	244	2839	0.18%	0.004%
27	2.926	2.907	2.942	VV	242	3766	0.24%	0.005%
28	2.957	2.942	2.967	VV	253	3693	0.24%	0.005%
29	2.970	2.967	2.976	VV	262	1294	0.08%	0.002%
30	3.003	2.976	3.035	VV	735	13966	0.90%	0.019%
31	3.038	3.035	3.043	VV	180	655	0.04%	0.001%
32	3.052	3.043	3.061	VV	207	1973	0.13%	0.003%
33	3.085	3.061	3.113	VV	501	10218	0.66%	0.014%
34	3.120	3.113	3.143	VV	362	3999	0.26%	0.005%
35	3.152	3.143	3.195	VV	164	3063	0.20%	0.004%
36	3.196	3.195	3.203	VV	150	423	0.03%	0.001%

					rt	er		
37	3.217	3.203	3.246	VV	194	3382	0.22%	0.005%
38	3.270	3.246	3.276	VV	192	2485	0.16%	0.003%
39	3.297	3.276	3.314	VV	349	6167	0.40%	0.008%
40	3.328	3.314	3.357	VV	593	8232	0.53%	0.011%
41	3.364	3.357	3.370	VV	226	1170	0.08%	0.002%
42	3.373	3.370	3.377	VV	172	514	0.03%	0.001%
43	3.385	3.377	3.396	VV	230	1085	0.07%	0.001%
44	3.435	3.396	3.439	VV	205	3039	0.20%	0.004%
45	3.455	3.439	3.470	VV	370	5247	0.34%	0.007%
46	3.481	3.470	3.501	VV	544	7083	0.46%	0.009%
47	3.526	3.501	3.541	VV	522	8134	0.53%	0.011%
48	3.554	3.541	3.570	VV	543	7231	0.47%	0.010%
49	3.580	3.570	3.586	VV	289	2241	0.15%	0.003%
50	3.594	3.586	3.606	VV	294	2534	0.16%	0.003%
51	3.628	3.606	3.641	VV	972	12056	0.78%	0.016%
52	3.648	3.641	3.677	VV	688	9177	0.59%	0.012%
53	3.709	3.677	3.739	VV	830	16649	1.08%	0.022%
54	3.761	3.739	3.805	VV	2431	39704	2.57%	0.053%
55	3.844	3.805	3.879	VV	1916	36239	2.35%	0.048%
56	3.900	3.879	3.917	VV	604	9838	0.64%	0.013%
57	3.922	3.917	3.929	VV	355	2320	0.15%	0.003%
58	3.948	3.929	3.972	VV	1150	14542	0.94%	0.019%
59	4.013	3.972	4.025	PV	1056	18785	1.22%	0.025%
60	4.034	4.025	4.063	VV	1024	13396	0.87%	0.018%
61	4.068	4.063	4.071	VV	220	804	0.05%	0.001%
62	4.083	4.071	4.094	VV	362	3680	0.24%	0.005%
63	4.111	4.094	4.123	VV	971	12400	0.80%	0.017%
64	4.132	4.123	4.162	VV	766	14723	0.95%	0.020%
65	4.180	4.162	4.196	VV	1049	16267	1.05%	0.022%
66	4.210	4.196	4.247	VV	930	17175	1.11%	0.023%
67	4.259	4.247	4.271	VV	548	6394	0.41%	0.009%
68	4.311	4.271	4.325	VV	1129	26318	1.70%	0.035%
69	4.341	4.325	4.361	VV	1395	20139	1.30%	0.027%
70	4.385	4.361	4.424	VV	1253	23020	1.49%	0.031%
71	4.427	4.424	4.432	VV	173	692	0.04%	0.001%
72	4.463	4.432	4.487	VV	1247	19012	1.23%	0.025%
73	4.535	4.487	4.571	VV	2750	52814	3.42%	0.071%
74	4.587	4.571	4.596	VV	528	6605	0.43%	0.009%
75	4.600	4.596	4.622	VV	446	5265	0.34%	0.007%
76	4.647	4.622	4.684	VV	3597	44487	2.88%	0.060%
77	4.704	4.684	4.717	VV	707	8495	0.55%	0.011%
78	4.747	4.717	4.767	VV	1474	27201	1.76%	0.036%
79	4.785	4.767	4.816	VV	1790	37556	2.43%	0.050%
80	4.821	4.816	4.842	VV	954	10637	0.69%	0.014%
81	4.858	4.842	4.874	VV	2892	31657	2.05%	0.042%
82	4.884	4.874	4.902	VV	1335	20511	1.33%	0.027%
83	4.917	4.902	4.925	VV	1415	17748	1.15%	0.024%
84	4.935	4.925	4.953	VV	1512	18565	1.20%	0.025%
85	4.975	4.953	4.981	VV	1269	16176	1.05%	0.022%
86	4.996	4.981	5.008	VV	2330	31652	2.05%	0.042%
87	5.012	5.008	5.026	VV	1951	18267	1.18%	0.024%
88	5.037	5.026	5.067	VV	2157	32751	2.12%	0.044%
89	5.084	5.067	5.123	VV	1636	30926	2.00%	0.041%

					rteres			
90	5.157	5.123	5.174	VV	933	18074	1.17%	0.024%
91	5.191	5.174	5.206	VV	1297	15540	1.01%	0.021%
92	5.220	5.206	5.245	VV	1540	23109	1.50%	0.031%
93	5.257	5.245	5.273	VV	1136	14519	0.94%	0.019%
94	5.283	5.273	5.308	VV	822	10269	0.66%	0.014%
95	5.335	5.308	5.348	VV	1400	19979	1.29%	0.027%
96	5.355	5.348	5.370	VV	1378	14419	0.93%	0.019%
97	5.377	5.370	5.388	VV	821	7650	0.50%	0.010%
98	5.411	5.388	5.430	VV	921	16162	1.05%	0.022%
99	5.463	5.430	5.477	PV	1363	19936	1.29%	0.027%
100	5.495	5.477	5.507	VV	1356	18987	1.23%	0.025%
101	5.523	5.507	5.548	VV	1713	33355	2.16%	0.045%
102	5.557	5.548	5.572	VV	1155	12846	0.83%	0.017%
103	5.592	5.572	5.606	VV	1303	20509	1.33%	0.027%
104	5.618	5.606	5.646	VV	1242	23302	1.51%	0.031%
105	5.653	5.646	5.671	VV	981	10573	0.68%	0.014%
106	5.683	5.671	5.699	VV	591	7169	0.46%	0.010%
107	5.726	5.699	5.748	VV	2803	38304	2.48%	0.051%
108	5.761	5.748	5.777	VV	846	10766	0.70%	0.014%
109	5.791	5.777	5.823	VV	1089	19807	1.28%	0.027%
110	5.844	5.823	5.857	VV	1054	16548	1.07%	0.022%
111	5.871	5.857	5.877	VV	1084	10952	0.71%	0.015%
112	5.897	5.877	5.935	VV	3094	61336	3.97%	0.082%
113	5.948	5.935	5.957	VV	1067	11950	0.77%	0.016%
114	5.981	5.957	5.998	VV	1273	22821	1.48%	0.031%
115	6.023	5.998	6.066	VV	3039	62754	4.06%	0.084%
116	6.094	6.066	6.118	VV	2662	41695	2.70%	0.056%
117	6.131	6.118	6.136	VV	907	8478	0.55%	0.011%
118	6.149	6.136	6.172	VV	1266	16226	1.05%	0.022%
119	6.198	6.172	6.215	PV	1662	20085	1.30%	0.027%
120	6.248	6.215	6.263	VV	1906	30591	1.98%	0.041%
121	6.282	6.263	6.324	VV	11376	156786	10.15%	0.210%
122	6.341	6.324	6.363	VV	1472	27632	1.79%	0.037%
123	6.389	6.363	6.418	VV	1299	31892	2.06%	0.043%
124	6.436	6.418	6.447	VV	1709	23723	1.54%	0.032%
125	6.472	6.447	6.502	VV	1967	48881	3.16%	0.065%
126	6.520	6.502	6.528	VV	905	12836	0.83%	0.017%
127	6.544	6.528	6.563	VV	1686	27847	1.80%	0.037%
128	6.593	6.563	6.604	VV	1600	30284	1.96%	0.041%
129	6.624	6.604	6.648	VV	2267	41039	2.66%	0.055%
130	6.673	6.648	6.685	VV	1583	29131	1.89%	0.039%
131	6.699	6.685	6.735	VV	1504	32664	2.11%	0.044%
132	6.746	6.735	6.753	VV	612	6224	0.40%	0.008%
133	6.771	6.753	6.775	VV	1193	12013	0.78%	0.016%
134	6.786	6.775	6.802	VV	1276	14352	0.93%	0.019%
135	6.837	6.802	6.861	VV	1211	30401	1.97%	0.041%
136	6.877	6.861	6.887	VV	1595	18246	1.18%	0.024%
137	6.905	6.887	6.927	VV	6618	85494	5.53%	0.114%
138	6.939	6.927	6.967	VV	3525	51586	3.34%	0.069%
139	6.977	6.967	6.992	VV	1531	17601	1.14%	0.024%
140	7.014	6.992	7.024	VV	1773	26489	1.71%	0.035%
141	7.035	7.024	7.052	VV	1769	25002	1.62%	0.033%

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142	7.079	7.052	7.107	VV	2452	54358	3.52%	0.073%
143	7.116	7.107	7.128	VV	1120	12359	0.80%	0.017%
144	7.146	7.128	7.176	VV	1958	39947	2.59%	0.053%
145	7.180	7.176	7.193	VV	850	7766	0.50%	0.010%
146	7.219	7.193	7.237	VV	1889	36806	2.38%	0.049%
147	7.256	7.237	7.272	VV	2675	43009	2.78%	0.058%
148	7.286	7.272	7.305	VV	3045	47209	3.06%	0.063%
149	7.325	7.305	7.353	VV	3236	61099	3.95%	0.082%
150	7.375	7.353	7.382	VV	2485	32856	2.13%	0.044%
151	7.395	7.382	7.419	VV	2560	54801	3.55%	0.073%
152	7.427	7.419	7.449	VV	2387	32885	2.13%	0.044%
153	7.474	7.449	7.509	VV	8384	145742	9.43%	0.195%
154	7.530	7.509	7.552	VV	3821	63832	4.13%	0.085%
155	7.574	7.552	7.591	VV	3770	58377	3.78%	0.078%
156	7.600	7.591	7.632	VV	1966	40314	2.61%	0.054%
157	7.660	7.632	7.692	VV	2913	78826	5.10%	0.105%
158	7.703	7.692	7.724	VV	2135	33344	2.16%	0.045%
159	7.753	7.724	7.777	VV	2234	56079	3.63%	0.075%
160	7.790	7.777	7.805	VV	2511	36220	2.34%	0.048%
161	7.831	7.805	7.849	VV	2775	61657	3.99%	0.083%
162	7.878	7.849	7.906	VV	6596	124970	8.09%	0.167%
163	7.923	7.906	7.945	VV	2220	42803	2.77%	0.057%
164	7.963	7.945	7.972	VV	2281	31646	2.05%	0.042%
165	7.990	7.972	8.024	VV	4439	98569	6.38%	0.132%
166	8.040	8.024	8.058	VV	3658	60202	3.90%	0.081%
167	8.080	8.058	8.109	VV	2282	63155	4.09%	0.085%
168	8.134	8.109	8.150	VV	4415	74576	4.83%	0.100%
169	8.165	8.150	8.202	VV	3524	93819	6.07%	0.126%
170	8.231	8.202	8.248	VV	3254	71286	4.61%	0.095%
171	8.276	8.248	8.294	VV	4180	91062	5.89%	0.122%
172	8.315	8.294	8.355	VV	5555	139434	9.03%	0.187%
173	8.403	8.355	8.433	VV	11493	233837	15.14%	0.313%
174	8.455	8.433	8.477	VV	5416	105738	6.84%	0.141%
175	8.507	8.477	8.525	VV	5035	112659	7.29%	0.151%
176	8.536	8.525	8.555	VV	4088	70754	4.58%	0.095%
177	8.583	8.555	8.607	VV	4350	119239	7.72%	0.160%
178	8.631	8.607	8.648	VV	4994	103383	6.69%	0.138%
179	8.693	8.648	8.714	VV	6293	187195	12.12%	0.250%
180	8.742	8.714	8.788	VV	12900	276800	17.92%	0.370%
181	8.799	8.788	8.817	VV	4418	68412	4.43%	0.092%
182	8.832	8.817	8.862	VV	4916	114254	7.40%	0.153%
183	8.875	8.862	8.903	VV	4159	86284	5.59%	0.115%
184	8.917	8.903	8.925	VV	3708	42462	2.75%	0.057%
185	8.943	8.925	8.955	VV	4938	75806	4.91%	0.101%
186	8.989	8.955	9.021	VV	9752	244751	15.84%	0.328%
187	9.042	9.021	9.064	VV	10725	175338	11.35%	0.235%
188	9.081	9.064	9.089	VV	5674	76283	4.94%	0.102%
189	9.125	9.089	9.156	VV	16192	340143	22.02%	0.455%
190	9.164	9.156	9.169	VV	4324	34367	2.22%	0.046%
191	9.172	9.169	9.184	VV	4401	37028	2.40%	0.050%
192	9.202	9.184	9.220	VV	6481	111794	7.24%	0.150%
193	9.238	9.220	9.257	VV	6106	116001	7.51%	0.155%
194	9.272	9.257	9.292	VV	7278	126382	8.18%	0.169%

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195	9.308	9.292	9.318	VV	5468	79574	5.15%	0.106%
196	9.352	9.318	9.372	VV	8198	198026	12.82%	0.265%
197	9.378	9.372	9.384	VV	4930	34456	2.23%	0.046%
198	9.406	9.384	9.421	VV	6044	116976	7.57%	0.157%
199	9.446	9.421	9.472	VV	6525	168416	10.90%	0.225%
200	9.496	9.472	9.524	VV	6160	155716	10.08%	0.208%
201	9.561	9.524	9.579	VV	5674	154399	9.99%	0.207%
202	9.614	9.579	9.631	VV	5317	143784	9.31%	0.192%
203	9.646	9.631	9.663	VV	5237	93460	6.05%	0.125%
204	9.698	9.663	9.732	VV	6216	215833	13.97%	0.289%
205	9.745	9.732	9.762	VV	5610	92180	5.97%	0.123%
206	9.784	9.762	9.837	VV	13620	387405	25.08%	0.518%
207	9.865	9.837	9.897	VV	9147	248090	16.06%	0.332%
208	9.905	9.897	9.917	VV	5952	67604	4.38%	0.090%
209	9.949	9.917	9.983	VV	7346	261140	16.90%	0.349%
210	9.988	9.983	10.003	VV	6038	67947	4.40%	0.091%
211	10.024	10.003	10.042	VV	6900	136513	8.84%	0.183%
212	10.062	10.042	10.091	VV	29206	461694	29.89%	0.618%
213	10.104	10.091	10.126	VV	9130	173464	11.23%	0.232%
214	10.152	10.126	10.177	VV	8243	228306	14.78%	0.306%
215	10.194	10.177	10.242	VV	8147	275614	17.84%	0.369%
216	10.252	10.242	10.267	VV	6312	93499	6.05%	0.125%
217	10.271	10.267	10.283	VV	6535	62455	4.04%	0.084%
218	10.298	10.283	10.335	VV	7236	188842	12.22%	0.253%
219	10.363	10.335	10.395	VV	7317	218885	14.17%	0.293%
220	10.409	10.395	10.415	VV	5970	69135	4.48%	0.093%
221	10.431	10.415	10.452	VV	6670	130768	8.46%	0.175%
222	10.472	10.452	10.487	VV	6173	120339	7.79%	0.161%
223	10.493	10.487	10.499	VV	5524	38423	2.49%	0.051%
224	10.504	10.499	10.511	VV	5610	38669	2.50%	0.052%
225	10.533	10.511	10.558	VV	8260	201408	13.04%	0.270%
226	10.583	10.558	10.609	VV	17075	346368	22.42%	0.463%
227	10.633	10.609	10.650	VV	8183	181983	11.78%	0.244%
228	10.666	10.650	10.692	VV	9124	198153	12.83%	0.265%
229	10.727	10.692	10.758	VV	9437	308267	19.95%	0.413%
230	10.781	10.758	10.814	VV	8959	246252	15.94%	0.330%
231	10.844	10.814	10.851	VV	9406	182127	11.79%	0.244%
232	10.863	10.851	10.882	VV	9274	159371	10.32%	0.213%
233	10.892	10.882	10.898	VV	7823	71721	4.64%	0.096%
234	10.913	10.898	10.930	VV	9131	164253	10.63%	0.220%
235	10.934	10.930	10.943	VV	8580	63379	4.10%	0.085%
236	10.956	10.943	10.971	VV	9029	146204	9.46%	0.196%
237	11.005	10.971	11.035	VV	29237	592286	38.34%	0.793%
238	11.052	11.035	11.077	VV	9862	222582	14.41%	0.298%
239	11.089	11.077	11.117	VV	7922	174275	11.28%	0.233%
240	11.145	11.117	11.150	VV	7994	149879	9.70%	0.201%
241	11.187	11.150	11.239	VV	37020	818045	52.95%	1.095%
242	11.265	11.239	11.298	VV	18638	430567	27.87%	0.576%
243	11.325	11.298	11.378	VV	10984	422075	27.32%	0.565%
244	11.389	11.378	11.397	VV	7566	81434	5.27%	0.109%
245	11.413	11.397	11.434	VV	8164	170221	11.02%	0.228%
246	11.444	11.434	11.453	VV	7798	86807	5.62%	0.116%

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247	11.462	11.453	11.477	VV	7763	108583	7.03%	0.145%
248	11.496	11.477	11.526	VV	11062	275038	17.80%	0.368%
249	11.541	11.526	11.548	VV	8506	111976	7.25%	0.150%
250	11.555	11.548	11.566	VV	8546	89486	5.79%	0.120%
251	11.584	11.566	11.604	VV	9649	208377	13.49%	0.279%
252	11.611	11.604	11.625	VV	8880	107078	6.93%	0.143%
253	11.635	11.625	11.651	VV	9040	134658	8.72%	0.180%
254	11.662	11.651	11.665	VV	8685	74246	4.81%	0.099%
255	11.670	11.665	11.697	VV	8651	157567	10.20%	0.211%
256	11.728	11.697	11.763	VV	19348	492509	31.88%	0.659%
257	11.792	11.763	11.817	VV	9317	264266	17.11%	0.354%
258	11.840	11.817	11.864	VV	8707	225866	14.62%	0.302%
259	11.884	11.864	11.890	VV	8680	130183	8.43%	0.174%
260	11.903	11.890	11.908	VV	9686	99826	6.46%	0.134%
261	11.913	11.908	11.916	VV	9711	46418	3.00%	0.062%
262	11.922	11.916	11.939	VV	9748	129517	8.38%	0.173%
263	11.944	11.939	11.979	VV	9703	210129	13.60%	0.281%
264	11.999	11.979	12.012	VV	11333	196261	12.70%	0.263%
265	12.030	12.012	12.068	VV	11882	336490	21.78%	0.450%
266	12.107	12.068	12.128	VV	13987	382099	24.73%	0.511%
267	12.140	12.128	12.159	VV	11978	208622	13.50%	0.279%
268	12.175	12.159	12.221	VV	11448	367440	23.78%	0.492%
269	12.256	12.221	12.266	VV	8831	220843	14.30%	0.296%
270	12.291	12.266	12.313	VV	12759	306670	19.85%	0.410%
271	12.326	12.313	12.350	VV	9855	201512	13.04%	0.270%
272	12.354	12.350	12.360	VV	8363	49815	3.22%	0.067%
273	12.408	12.360	12.431	VV	11166	417932	27.05%	0.559%
274	12.439	12.431	12.453	VV	9631	122132	7.91%	0.163%
275	12.457	12.453	12.460	VV	9152	34447	2.23%	0.046%
276	12.469	12.460	12.487	VV	9727	151480	9.81%	0.203%
277	12.514	12.487	12.520	VV	9658	184925	11.97%	0.247%
278	12.560	12.520	12.635	VV	77209	1505561	97.46%	2.015%
279	12.639	12.635	12.653	VV	10341	110383	7.15%	0.148%
280	12.671	12.653	12.684	VV	10469	188752	12.22%	0.253%
281	12.689	12.684	12.694	VV	9925	56525	3.66%	0.076%
282	12.699	12.694	12.705	VV	10019	62093	4.02%	0.083%
283	12.717	12.705	12.757	VV	9922	292362	18.92%	0.391%
284	12.791	12.757	12.848	VV	10414	503594	32.60%	0.674%
285	12.894	12.848	12.917	VV	14038	463141	29.98%	0.620%
286	12.930	12.917	12.937	VV	10323	120212	7.78%	0.161%
287	12.954	12.937	12.988	VV	10845	300297	19.44%	0.402%
288	13.011	12.988	13.082	VV	32076	827348	53.56%	1.107%
289	13.100	13.082	13.123	VV	8686	210160	13.60%	0.281%
290	13.127	13.123	13.132	VV	8294	41171	2.67%	0.055%
291	13.151	13.132	13.162	VV	8857	155620	10.07%	0.208%
292	13.201	13.162	13.233	VV	9480	368925	23.88%	0.494%
293	13.261	13.233	13.286	VV	9073	275991	17.87%	0.369%
294	13.310	13.286	13.330	VV	26128	427902	27.70%	0.573%
295	13.342	13.330	13.358	VV	13267	196170	12.70%	0.263%
296	13.369	13.358	13.392	VV	11388	211260	13.68%	0.283%
297	13.406	13.392	13.426	VV	10263	193252	12.51%	0.259%
298	13.448	13.426	13.474	VV	10199	275034	17.80%	0.368%
299	13.493	13.474	13.520	VV	9521	246382	15.95%	0.330%

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300	13.539	13.520	13.553	VV	8683	165489	10.71%	0.221%
301	13.585	13.553	13.622	VV	12580	442384	28.64%	0.592%
302	13.635	13.622	13.685	VV	12534	399799	25.88%	0.535%
303	13.706	13.685	13.720	VV	9535	189138	12.24%	0.253%
304	13.733	13.720	13.755	VV	10185	195423	12.65%	0.262%
305	13.793	13.755	13.862	VV	25305	820718	53.13%	1.098%
306	13.908	13.862	13.935	VV	12759	458783	29.70%	0.614%
307	13.941	13.935	13.961	VV	9304	141834	9.18%	0.190%
308	13.983	13.961	13.991	VV	9825	171206	11.08%	0.229%
309	14.013	13.991	14.035	VV	14533	310031	20.07%	0.415%
310	14.054	14.035	14.088	VV	10936	328356	21.25%	0.439%
311	14.104	14.088	14.122	VV	10664	196462	12.72%	0.263%
312	14.149	14.122	14.169	VV	11515	298105	19.30%	0.399%
313	14.180	14.169	14.200	VV	10848	190389	12.32%	0.255%
314	14.221	14.200	14.257	VV	10267	324879	21.03%	0.435%
315	14.277	14.257	14.285	VV	9185	151358	9.80%	0.203%
316	14.300	14.285	14.325	VV	9495	214250	13.87%	0.287%
317	14.337	14.325	14.346	VV	8749	103333	6.69%	0.138%
318	14.387	14.346	14.413	VV	10253	378269	24.49%	0.506%
319	14.435	14.413	14.441	VV	9268	153004	9.90%	0.205%
320	14.453	14.441	14.493	VV	9477	280401	18.15%	0.375%
321	14.497	14.493	14.503	VV	9036	52925	3.43%	0.071%
322	14.515	14.503	14.521	VV	9579	101516	6.57%	0.136%
323	14.555	14.521	14.579	VV	10578	342519	22.17%	0.458%
324	14.613	14.579	14.633	VV	10201	312676	20.24%	0.418%
325	14.642	14.633	14.648	VV	9671	85738	5.55%	0.115%
326	14.659	14.648	14.692	VV	10112	243946	15.79%	0.326%
327	14.716	14.692	14.757	VV	12269	397306	25.72%	0.532%
328	14.761	14.757	14.765	VV	9825	45578	2.95%	0.061%
329	14.783	14.765	14.801	VV	10501	218786	14.16%	0.293%
330	14.844	14.801	14.865	VV	11344	405344	26.24%	0.542%
331	14.887	14.865	14.911	VV	11395	279926	18.12%	0.375%
332	14.915	14.911	14.922	VV	9574	61019	3.95%	0.082%
333	14.969	14.922	14.996	VV	10346	437167	28.30%	0.585%
334	15.006	14.996	15.024	VV	9832	163379	10.58%	0.219%
335	15.056	15.024	15.099	VV	90149	1544856	100.00%	2.067%
336	15.105	15.099	15.110	VV	9645	62230	4.03%	0.083%
337	15.113	15.110	15.131	VV	9640	115198	7.46%	0.154%
338	15.162	15.131	15.179	VV	10465	285500	18.48%	0.382%
339	15.200	15.179	15.218	VV	13987	282296	18.27%	0.378%
340	15.256	15.218	15.287	VV	15762	543361	35.17%	0.727%
341	15.301	15.287	15.309	VV	10164	135656	8.78%	0.182%
342	15.314	15.309	15.318	VV	10211	52953	3.43%	0.071%
343	15.330	15.318	15.349	VV	11033	187806	12.16%	0.251%
344	15.361	15.349	15.374	VV	10637	157326	10.18%	0.211%
345	15.392	15.374	15.421	VV	11182	292081	18.91%	0.391%
346	15.426	15.421	15.440	VV	9740	110563	7.16%	0.148%
347	15.449	15.440	15.454	VV	9737	80858	5.23%	0.108%
348	15.461	15.454	15.482	VV	9716	156681	10.14%	0.210%
349	15.511	15.482	15.547	VV	10111	376641	24.38%	0.504%
350	15.552	15.547	15.557	VV	9885	52783	3.42%	0.071%
351	15.561	15.557	15.574	VV	9564	99318	6.43%	0.133%

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352	15.588	15.574	15.610	VV	9587	201953	13.07%	0.270%
353	15.643	15.610	15.752	VV	31858	1238055	80.14%	1.657%
354	15.800	15.752	15.858	VV	22070	834761	54.03%	1.117%
355	15.877	15.858	15.896	VV	11363	236920	15.34%	0.317%
356	15.915	15.896	15.947	VV	10592	300211	19.43%	0.402%
357	15.962	15.947	15.973	VV	9522	145630	9.43%	0.195%
358	16.012	15.973	16.017	VV	10483	259948	16.83%	0.348%
359	16.038	16.017	16.071	VV	11106	334618	21.66%	0.448%
360	16.093	16.071	16.131	VV	10880	367274	23.77%	0.491%
361	16.134	16.131	16.146	VV	9730	84597	5.48%	0.113%
362	16.169	16.146	16.183	VV	10413	221514	14.34%	0.296%
363	16.192	16.183	16.198	VV	9518	84647	5.48%	0.113%
364	16.201	16.198	16.211	VV	9503	69155	4.48%	0.093%
365	16.215	16.211	16.226	VV	9138	81318	5.26%	0.109%
366	16.238	16.226	16.259	VV	9913	189456	12.26%	0.254%
367	16.285	16.259	16.317	VV	14750	401133	25.97%	0.537%
368	16.322	16.317	16.327	VV	10210	64069	4.15%	0.086%
369	16.331	16.327	16.350	VV	10159	128548	8.32%	0.172%
370	16.356	16.350	16.362	VV	9029	65898	4.27%	0.088%
371	16.381	16.362	16.400	VV	9243	198810	12.87%	0.266%
372	16.408	16.400	16.420	VV	9131	105593	6.84%	0.141%
373	16.426	16.420	16.433	VV	8829	68998	4.47%	0.092%
374	16.479	16.433	16.504	VV	11504	417451	27.02%	0.559%
375	16.525	16.504	16.537	VV	9769	185831	12.03%	0.249%
376	16.542	16.537	16.549	VV	9460	70399	4.56%	0.094%
377	16.557	16.549	16.560	VV	9816	64860	4.20%	0.087%
378	16.597	16.560	16.628	VV	12241	447638	28.98%	0.599%
379	16.671	16.628	16.700	VV	12772	483338	31.29%	0.647%
380	16.706	16.700	16.710	VV	9978	60522	3.92%	0.081%
381	16.717	16.710	16.724	VV	10165	84923	5.50%	0.114%
382	16.736	16.724	16.743	VV	10393	117530	7.61%	0.157%
383	16.768	16.743	16.835	VV	20236	713642	46.19%	0.955%
384	16.839	16.835	16.843	VV	9856	46378	3.00%	0.062%
385	16.855	16.843	16.861	VV	10116	105272	6.81%	0.141%
386	16.865	16.861	16.879	VV	9975	109483	7.09%	0.147%
387	16.897	16.879	16.909	VV	11404	191213	12.38%	0.256%
388	16.913	16.909	16.932	VV	11201	150795	9.76%	0.202%
389	16.941	16.932	16.958	VV	10973	166720	10.79%	0.223%
390	16.981	16.958	16.996	VV	10946	243072	15.73%	0.325%
391	17.004	16.996	17.019	VV	10975	147407	9.54%	0.197%
392	17.051	17.019	17.056	VV	11302	230371	14.91%	0.308%
393	17.061	17.056	17.066	VV	11278	67190	4.35%	0.090%
394	17.088	17.066	17.126	VV	14211	436391	28.25%	0.584%
395	17.146	17.126	17.183	VV	13999	397058	25.70%	0.531%
396	17.187	17.183	17.193	VV	10111	63375	4.10%	0.085%
397	17.238	17.193	17.277	VV	17106	639542	41.40%	0.856%
398	17.287	17.277	17.312	VV	12860	239667	15.51%	0.321%
399	17.319	17.312	17.328	VV	10134	98980	6.41%	0.132%
400	17.335	17.328	17.340	VV	10126	69658	4.51%	0.093%
401	17.365	17.340	17.387	VV	11338	294747	19.08%	0.394%
402	17.400	17.387	17.420	VV	10712	205587	13.31%	0.275%
403	17.427	17.420	17.439	VV	10532	118531	7.67%	0.159%
404	17.481	17.439	17.507	VV	12251	452154	29.27%	0.605%

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405	17.513	17.507	17.518	VV	9960	65862	4.26%	0.088%
406	17.533	17.518	17.540	VV	10602	134274	8.69%	0.180%
407	17.560	17.540	17.566	VV	11817	174049	11.27%	0.233%
408	17.569	17.566	17.593	VV	12064	179073	11.59%	0.240%
409	17.617	17.593	17.622	VV	11082	187919	12.16%	0.251%
410	17.628	17.622	17.643	VV	11260	137016	8.87%	0.183%
411	17.653	17.643	17.668	VV	11577	160798	10.41%	0.215%
412	17.690	17.668	17.726	VV	17484	432990	28.03%	0.579%
413	17.731	17.726	17.739	VV	9611	72876	4.72%	0.098%
414	17.743	17.739	17.751	VV	9296	67252	4.35%	0.090%
415	17.758	17.751	17.769	VV	9345	98474	6.37%	0.132%
416	17.773	17.769	17.777	VV	9492	44558	2.88%	0.060%
417	17.807	17.777	17.836	VV	11723	357414	23.14%	0.478%
418	17.856	17.836	17.882	VV	9469	249882	16.18%	0.334%
419	17.889	17.882	17.921	VV	8819	197314	12.77%	0.264%
420	17.924	17.921	17.939	VV	8348	89501	5.79%	0.120%
421	17.965	17.939	17.971	VV	8554	155456	10.06%	0.208%
422	17.976	17.971	17.996	VV	8558	122744	7.95%	0.164%
423	18.010	17.996	18.016	VV	8625	99587	6.45%	0.133%
424	18.027	18.016	18.043	VV	9094	144447	9.35%	0.193%
425	18.063	18.043	18.071	VV	9098	143248	9.27%	0.192%
426	18.089	18.071	18.103	VV	9549	179303	11.61%	0.240%
427	18.127	18.103	18.159	VV	17298	390078	25.25%	0.522%
428	18.175	18.159	18.181	VV	8484	105899	6.85%	0.142%
429	18.195	18.181	18.202	VV	8898	113104	7.32%	0.151%
430	18.212	18.202	18.232	VV	8915	153111	9.91%	0.205%
431	18.273	18.232	18.294	VV	12203	369082	23.89%	0.494%
432	18.298	18.294	18.329	VV	9897	192068	12.43%	0.257%
433	18.348	18.329	18.364	VV	8560	174667	11.31%	0.234%
434	18.369	18.364	18.389	VV	7661	112221	7.26%	0.150%
435	18.417	18.389	18.436	VV	8593	226267	14.65%	0.303%
436	18.447	18.436	18.457	VV	8563	102887	6.66%	0.138%
437	18.490	18.457	18.520	VV	21180	565242	36.59%	0.756%
438	18.523	18.520	18.529	VV	12681	68043	4.40%	0.091%
439	18.552	18.529	18.595	VV	17666	472412	30.58%	0.632%
440	18.600	18.595	18.607	VV	7407	51000	3.30%	0.068%
441	18.643	18.607	18.687	VV	12693	424381	27.47%	0.568%
442	18.690	18.687	18.742	VV	7046	207289	13.42%	0.277%
443	18.780	18.742	18.833	VV	8665	388643	25.16%	0.520%
444	18.838	18.833	18.867	VV	6708	126742	8.20%	0.170%
445	18.873	18.867	18.895	VV	5941	95911	6.21%	0.128%
446	18.922	18.895	18.937	VV	7122	164604	10.65%	0.220%
447	18.965	18.937	19.028	VV	13273	461826	29.89%	0.618%
448	19.065	19.028	19.087	VV	8083	230431	14.92%	0.308%
449	19.107	19.087	19.111	VV	7460	96292	6.23%	0.129%
450	19.115	19.111	19.152	VV	7454	154619	10.01%	0.207%
451	19.155	19.152	19.170	VV	5734	61958	4.01%	0.083%
452	19.179	19.170	19.197	VV	5573	84478	5.47%	0.113%
453	19.226	19.197	19.232	VV	6877	130604	8.45%	0.175%
454	19.237	19.232	19.275	VV	7038	163391	10.58%	0.219%
455	19.323	19.275	19.346	VV	18269	464488	30.07%	0.622%
456	19.366	19.346	19.426	VV	15608	474132	30.69%	0.634%

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457	19.430	19.426	19.434	VV	5754	30260	1.96%	0.040%
458	19.446	19.434	19.450	VV	5903	53823	3.48%	0.072%
459	19.476	19.450	19.483	VV	6723	126368	8.18%	0.169%
460	19.491	19.483	19.514	VV	6773	107075	6.93%	0.143%
461	19.548	19.514	19.555	VV	7864	162564	10.52%	0.218%
462	19.561	19.555	19.584	VV	7511	110445	7.15%	0.148%
463	19.602	19.584	19.639	VV	5636	170266	11.02%	0.228%
464	19.653	19.639	19.674	VV	4868	95879	6.21%	0.128%
465	19.680	19.674	19.687	VV	4461	31761	2.06%	0.043%
466	19.690	19.687	19.697	VV	4252	26646	1.72%	0.036%
467	19.709	19.697	19.715	VV	4464	43244	2.80%	0.058%
468	19.720	19.715	19.724	VV	4311	24224	1.57%	0.032%
469	19.754	19.724	19.808	VV	9054	308035	19.94%	0.412%
470	19.855	19.808	19.892	VV	5781	256537	16.61%	0.343%
471	19.906	19.892	19.912	VV	4580	53325	3.45%	0.071%
472	19.919	19.912	19.923	VV	4641	29775	1.93%	0.040%
473	19.926	19.923	19.933	VV	4667	29410	1.90%	0.039%
474	19.937	19.933	19.942	VV	4757	25320	1.64%	0.034%
475	19.964	19.942	19.987	VV	5236	134191	8.69%	0.180%
476	20.060	19.987	20.082	VV	7977	347068	22.47%	0.464%
477	20.103	20.082	20.108	VV	6980	98632	6.38%	0.132%
478	20.128	20.108	20.150	VV	8316	186505	12.07%	0.250%
479	20.159	20.150	20.216	VV	6507	220863	14.30%	0.296%
480	20.223	20.216	20.228	VV	4609	32990	2.14%	0.044%
481	20.273	20.228	20.292	VV	5375	186637	12.08%	0.250%
482	20.343	20.292	20.348	VV	6076	183335	11.87%	0.245%
483	20.374	20.348	20.424	VV	7142	276288	17.88%	0.370%
484	20.428	20.424	20.435	VV	5331	33777	2.19%	0.045%
485	20.444	20.435	20.449	VV	5496	44942	2.91%	0.060%
486	20.459	20.449	20.474	VV	5770	83687	5.42%	0.112%
487	20.496	20.474	20.523	VV	7861	191341	12.39%	0.256%
488	20.554	20.523	20.594	VV	8932	290492	18.80%	0.389%
489	20.598	20.594	20.617	VV	5384	73141	4.73%	0.098%
490	20.655	20.617	20.698	VV	13025	368434	23.85%	0.493%
491	20.703	20.698	20.709	VV	5852	37762	2.44%	0.051%
492	20.729	20.709	20.743	VV	6013	119164	7.71%	0.159%
493	20.765	20.743	20.791	VV	6591	179560	11.62%	0.240%
494	20.794	20.791	20.822	VV	6322	108429	7.02%	0.145%
495	20.830	20.822	20.836	VV	5577	43605	2.82%	0.058%
496	20.857	20.836	20.896	VV	6995	217860	14.10%	0.292%
497	20.900	20.896	20.910	VV	5298	43590	2.82%	0.058%
498	20.914	20.910	20.921	VV	5163	32508	2.10%	0.044%
499	20.931	20.921	20.948	VV	5060	81917	5.30%	0.110%
500	20.967	20.948	20.976	VV	5262	83240	5.39%	0.111%
501	20.990	20.976	21.007	VV	5133	96413	6.24%	0.129%
502	21.048	21.007	21.107	VV	8314	358366	23.20%	0.480%
503	21.112	21.107	21.132	VV	4724	69986	4.53%	0.094%
504	21.137	21.132	21.144	VV	4339	30181	1.95%	0.040%
505	21.156	21.144	21.161	VV	4258	43152	2.79%	0.058%
506	21.167	21.161	21.178	VV	4202	41805	2.71%	0.056%
507	21.182	21.178	21.210	VV	4068	73764	4.77%	0.099%
508	21.253	21.210	21.300	VV	5191	225180	14.58%	0.301%
509	21.306	21.300	21.316	VV	3417	32099	2.08%	0.043%

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510	21.322	21.316	21.327	VV	3400	22773	1.47%	0.030%
511	21.338	21.327	21.347	VV	3499	41242	2.67%	0.055%
512	21.354	21.347	21.364	VV	3387	32235	2.09%	0.043%
513	21.374	21.364	21.387	VV	3203	41902	2.71%	0.056%
514	21.397	21.387	21.403	VV	3227	30956	2.00%	0.041%
515	21.414	21.403	21.432	VV	3291	53890	3.49%	0.072%
516	21.437	21.432	21.449	VV	3013	29465	1.91%	0.039%
517	21.456	21.449	21.466	VV	3116	30327	1.96%	0.041%
518	21.490	21.466	21.516	VV	3017	84821	5.49%	0.114%
519	21.522	21.516	21.539	VV	2763	38423	2.49%	0.051%
520	21.545	21.539	21.552	VV	2863	21842	1.41%	0.029%
521	21.563	21.552	21.571	VV	2940	31361	2.03%	0.042%
522	21.615	21.571	21.663	VV	5650	217652	14.09%	0.291%
523	21.693	21.663	21.742	VV	3253	123334	7.98%	0.165%
524	21.746	21.742	21.759	VV	1976	19782	1.28%	0.026%
525	21.764	21.759	21.770	VV	1942	12484	0.81%	0.017%
526	21.779	21.770	21.792	VV	1998	25363	1.64%	0.034%
527	21.801	21.792	21.808	VV	2062	18855	1.22%	0.025%
528	21.811	21.808	21.818	VV	2128	12150	0.79%	0.016%
529	21.825	21.818	21.861	VV	2101	49112	3.18%	0.066%
530	21.868	21.861	21.897	VV	1770	35947	2.33%	0.048%
531	21.901	21.897	21.925	VV	1540	22576	1.46%	0.030%
532	21.935	21.925	21.945	VV	1448	16405	1.06%	0.022%
533	21.950	21.945	21.960	VV	1442	11700	0.76%	0.016%
534	21.970	21.960	21.978	VV	1407	13967	0.90%	0.019%
535	21.986	21.978	22.003	VV	1210	16310	1.06%	0.022%
536	22.010	22.003	22.017	VV	1124	8530	0.55%	0.011%
537	22.023	22.017	22.037	VV	1188	12983	0.84%	0.017%
538	22.043	22.037	22.050	VV	931	6462	0.42%	0.009%
539	22.064	22.050	22.076	VV	908	12689	0.82%	0.017%
540	22.082	22.076	22.091	VV	749	5902	0.38%	0.008%
541	22.094	22.091	22.104	VV	742	5337	0.35%	0.007%
542	22.116	22.104	22.124	VV	727	8014	0.52%	0.011%
543	22.136	22.124	22.146	VV	854	9888	0.64%	0.013%
544	22.153	22.146	22.158	VV	832	5527	0.36%	0.007%
545	22.198	22.158	22.232	VV	1782	55870	3.62%	0.075%
546	22.277	22.232	22.344	VV	3188	109374	7.08%	0.146%
547	22.353	22.344	22.363	VV	241	1986	0.13%	0.003%
548	22.367	22.363	22.395	VV	226	2906	0.19%	0.004%

Sum of corrected areas: 74729794

FF102925.M Fri Oct 31 03:45:20 2025



CALIBRATION SUMMARY

TPH GC INITIAL CALIBRATION SUMMARY

Lab Name: Alliance Contract: AECO02
 ProjectID: AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-171
 Lab Code: ACE SDG No.: Q3434

Calibration Sequence : FF102925		Test : TPH GC	
Concentration (PPM)	Area Count	Reference Factor	File ID
85	9472915	111446	FF016603.D
170	18165984	106859	FF016604.D
340	37023074	108891	FF016605.D
850	89698209	105527	FF016606.D
1700	169764046	99861	FF016607.D
AVG RF : 106517		% RSD : 4.074	AVG RT : 15.059

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF102925\
 Data File : FF016603.D
 Signal(s) : FID2B.ch
 Acq On : 29 Oct 2025 10:39
 Operator : YP\AJ
 Sample : 100 TRPH STD
 Misc :
 ALS Vial : 71 Sample Multiplier: 1

Instrument :
 FID_F
 ClientSampleId :
 100 TRPH STD

Integration File: autoint1.e
 Quant Time: Oct 29 11:25:51 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
 Quant Title :
 QLast Update : Wed Oct 29 11:21:39 2025
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1uL
 Signal Phase : Rxi-1ms
 Signal Info : 20mx0.18mmx0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.064	9733531	97.182 ug/ml
Target Compounds			
1) N-OCTANE	2.040	10350779	96.937 ug/ml
2) N-DECANE	4.577	10535689	97.169 ug/ml
3) N-DODECANE	6.757	10655869	97.262 ug/ml
4) N-TETRADECANE	8.592	10776848	97.151 ug/ml
5) N-HEXADECANE	10.200	10807655	97.177 ug/ml
6) N-OCTADECANE	11.647	11088236	97.169 ug/ml
7) N-EICOSANE	12.961	11393354	97.116 ug/ml
8) N-DOCOSANE	14.162	11113191	97.184 ug/ml
10) N-TETRACOSANE	15.269	11063677	97.217 ug/ml
11) N-HEXACOSANE	16.294	10732434	97.330 ug/ml
12) N-OCTACOSANE	17.248	10583031	97.296 ug/ml
13) N-TRIACONTANE	18.138	10372109	97.232 ug/ml
14) N-DOTRIACONTANE	18.975	9760051	97.148 ug/ml
15) N-TETRATRIACONTANE	19.762	8984214	97.186 ug/ml
16) N-HEXATRIACONTANE	20.504	7905974	97.436 ug/ml
17) N-OCTATRIACONTANE	21.263	7124793	97.678 ug/ml
18) N-TETRACONTANE	22.208	6516142	97.834 ug/ml

(f)=RT Delta > 1/2 Window

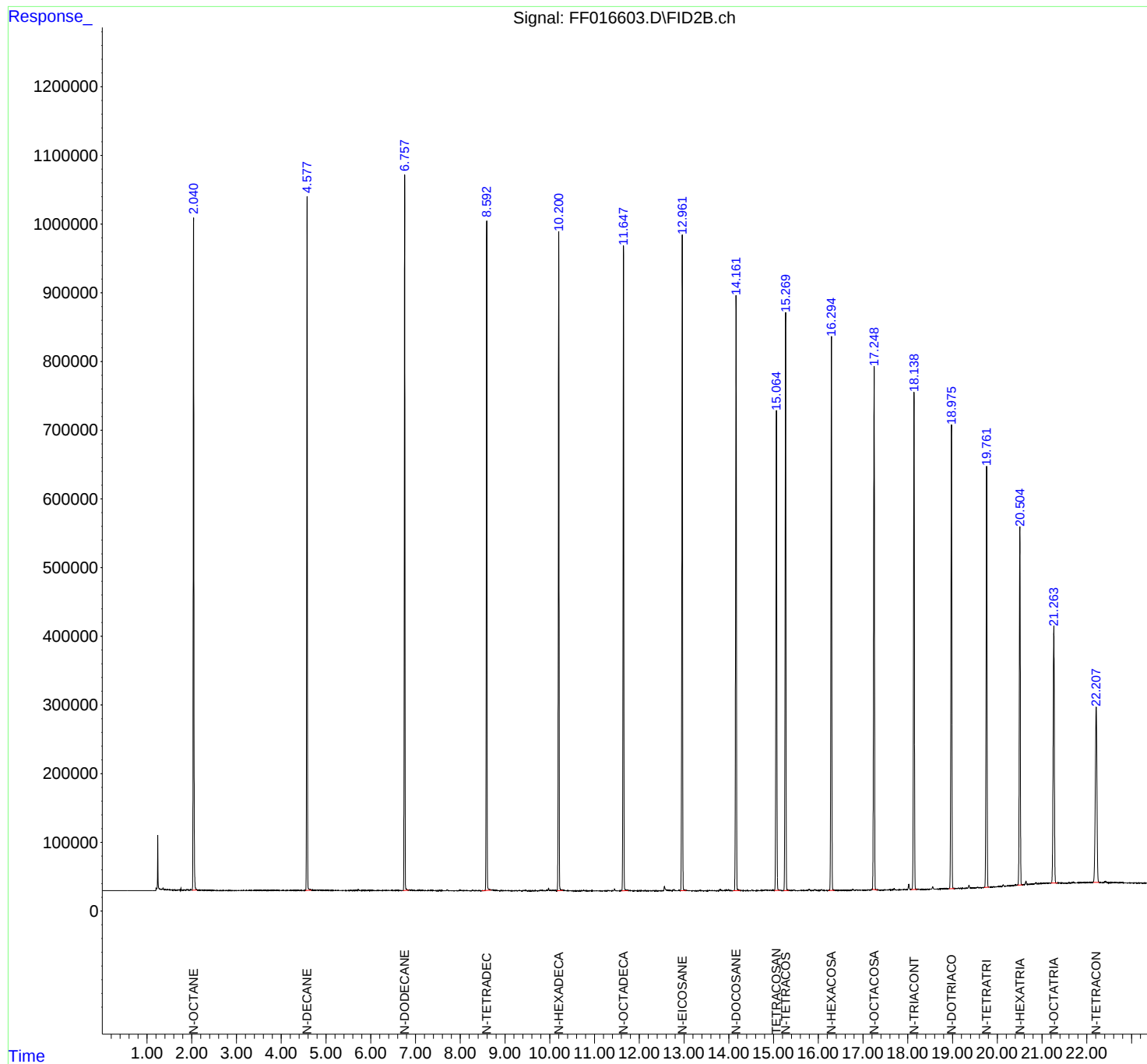
(m)=manual int.

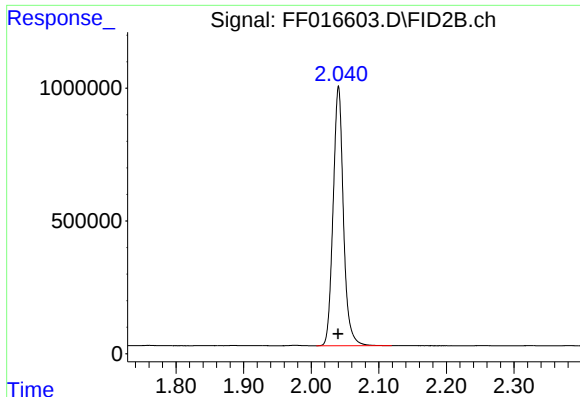
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF102925\
Data File : FF016603.D
Signal(s) : FID2B.ch
Acq On : 29 Oct 2025 10:39
Operator : YP\AJ
Sample : 100 TRPH STD
Misc :
ALS Vial : 71 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
100 TRPH STD

Integration File: autoint1.e
Quant Time: Oct 29 11:25:51 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
Quant Title :
QLast Update : Wed Oct 29 11:21:39 2025
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um

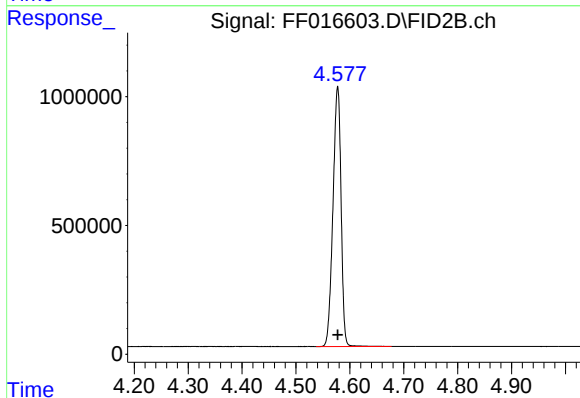




#1 N-OCTANE

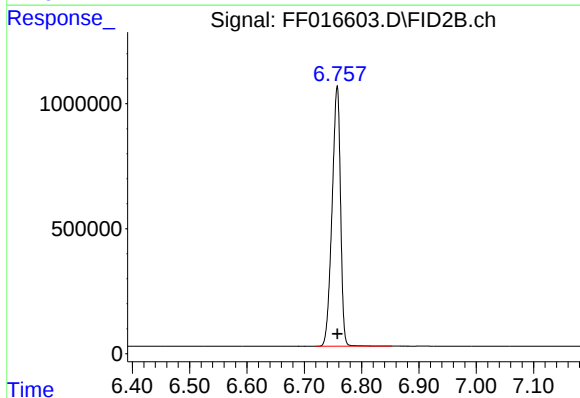
R.T.: 2.040 min
Delta R.T.: 0.000 min
Response: 10350779
Conc: 96.94 ug/ml

Instrument :
FID_F
ClientSampleId :
100 TRPH STD



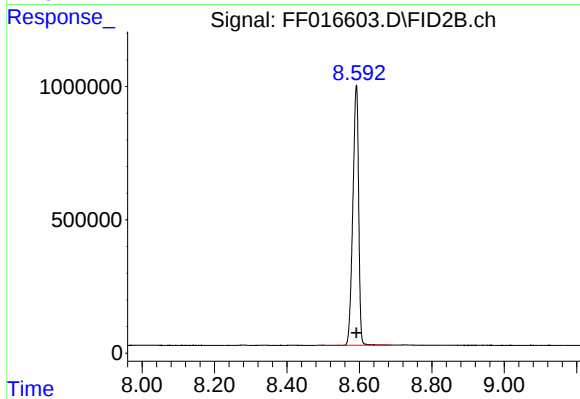
#2 N-DECANE

R.T.: 4.577 min
Delta R.T.: 0.000 min
Response: 10535689
Conc: 97.17 ug/ml



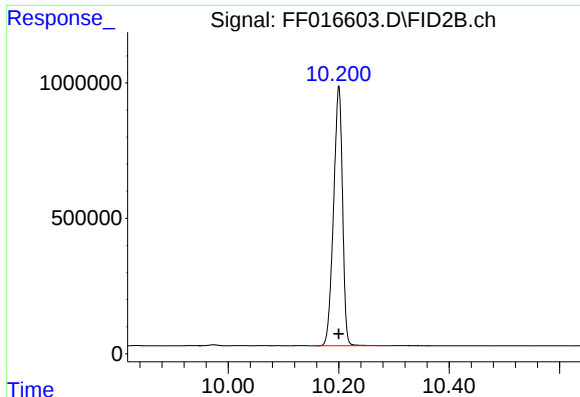
#3 N-DODECANE

R.T.: 6.757 min
Delta R.T.: 0.000 min
Response: 10655869
Conc: 97.26 ug/ml



#4 N-TETRADECANE

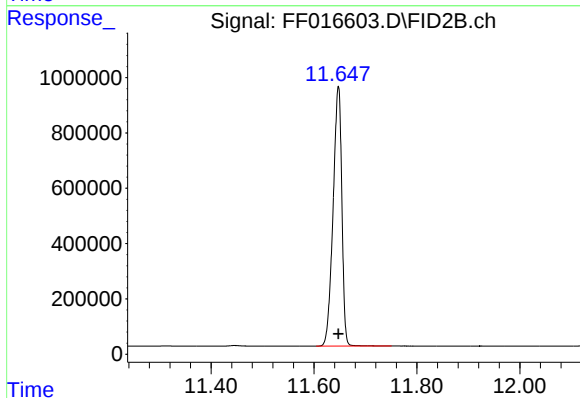
R.T.: 8.592 min
Delta R.T.: 0.000 min
Response: 10776848
Conc: 97.15 ug/ml



#5 N-HEXADECANE

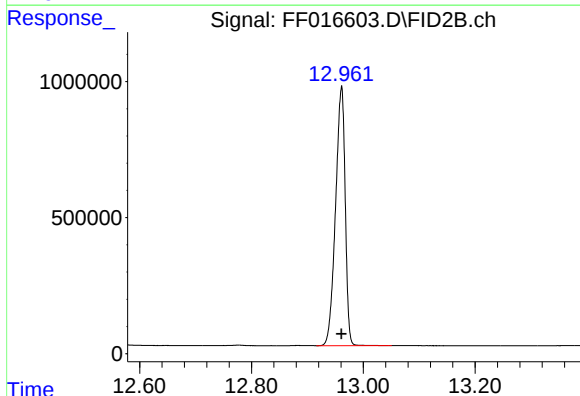
R.T.: 10.200 min
Delta R.T.: 0.000 min
Response: 10807655
Conc: 97.18 ug/ml

Instrument :
FID_F
ClientSampleId :
100 TRPH STD



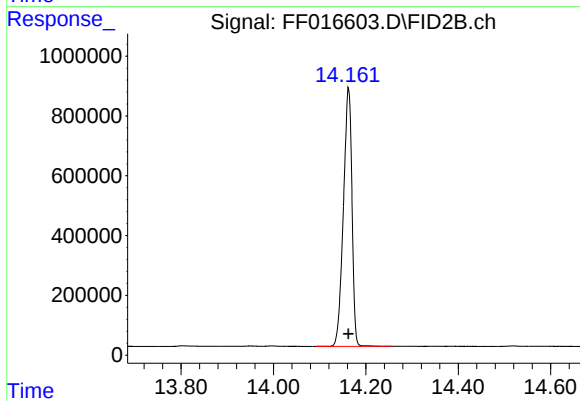
#6 N-OCTADECANE

R.T.: 11.647 min
Delta R.T.: 0.000 min
Response: 11088236
Conc: 97.17 ug/ml



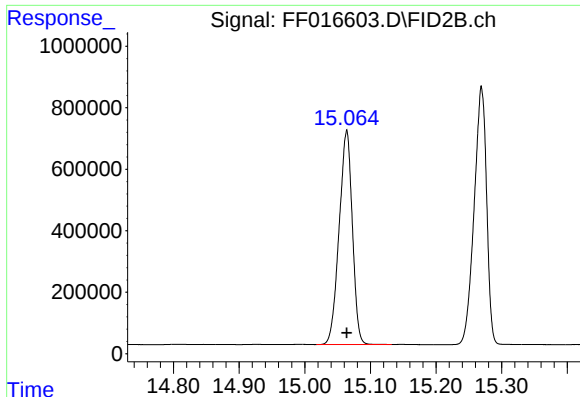
#7 N-EICOSANE

R.T.: 12.961 min
Delta R.T.: 0.000 min
Response: 11393354
Conc: 97.12 ug/ml



#8 N-DOCOSANE

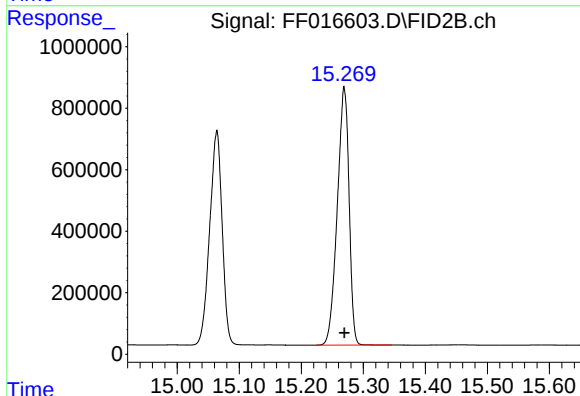
R.T.: 14.162 min
Delta R.T.: 0.000 min
Response: 11113191
Conc: 97.18 ug/ml



#9 TETRACOSANE-d50 (SURROGATE)

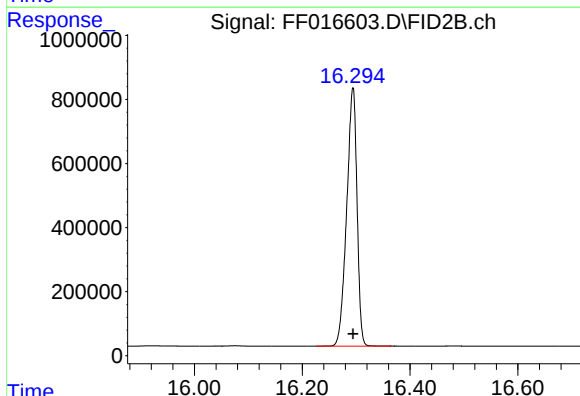
R.T.: 15.064 min
Delta R.T.: 0.000 min
Response: 9733531
Conc: 97.18 ug/ml

Instrument :
FID_F
ClientSampleId :
100 TRPH STD



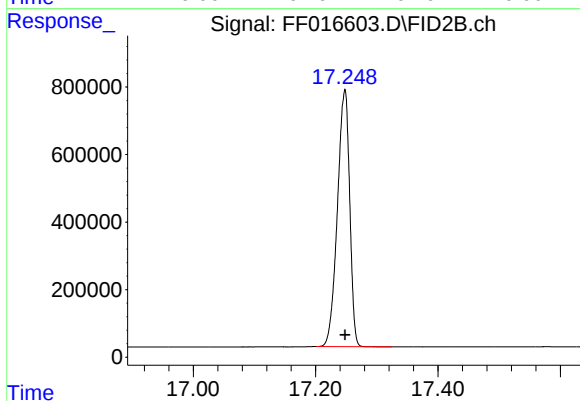
#10 N-TETRACOSANE

R.T.: 15.269 min
Delta R.T.: 0.000 min
Response: 11063677
Conc: 97.22 ug/ml



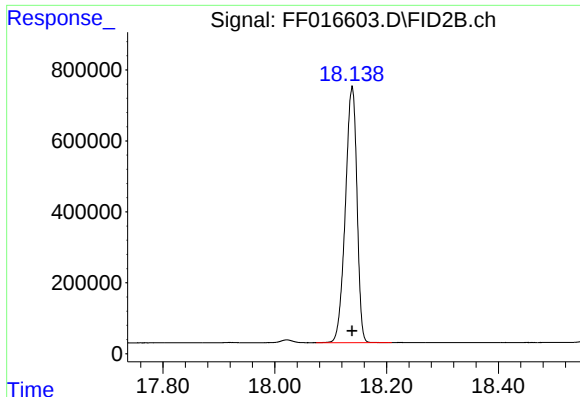
#11 N-HEXACOSANE

R.T.: 16.294 min
Delta R.T.: 0.000 min
Response: 10732434
Conc: 97.33 ug/ml



#12 N-OCTACOSANE

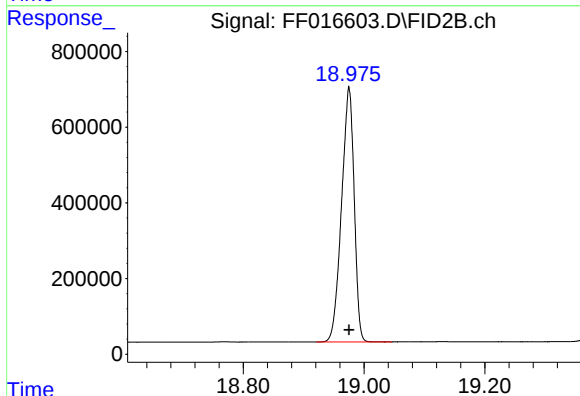
R.T.: 17.248 min
Delta R.T.: 0.000 min
Response: 10583031
Conc: 97.30 ug/ml



#13 N-TRIACONTANE

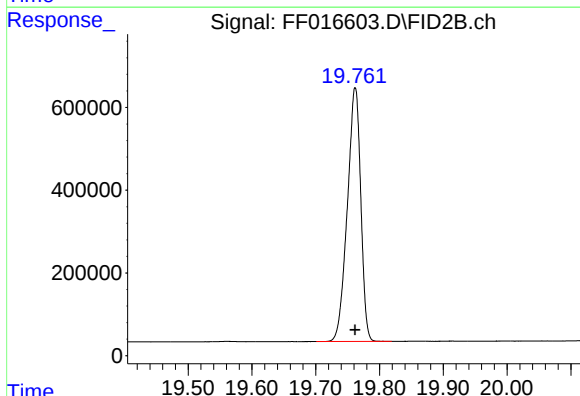
R.T.: 18.138 min
Delta R.T.: 0.000 min
Response: 10372109
Conc: 97.23 ug/ml

Instrument :
FID_F
ClientSampleId :
100 TRPH STD



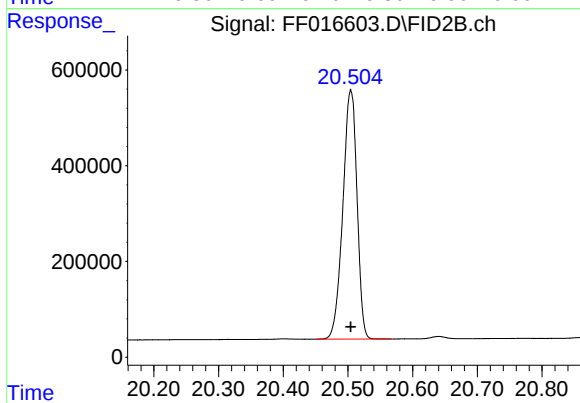
#14 N-DOTRIACONTANE

R.T.: 18.975 min
Delta R.T.: 0.000 min
Response: 9760051
Conc: 97.15 ug/ml



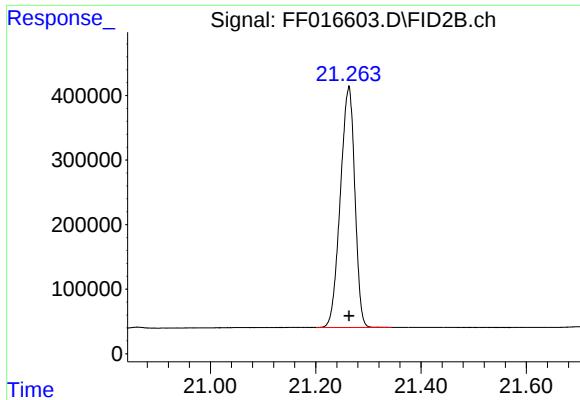
#15 N-TETRATRIACONTANE

R.T.: 19.762 min
Delta R.T.: 0.000 min
Response: 8984214
Conc: 97.19 ug/ml



#16 N-HEXATRIACONTANE

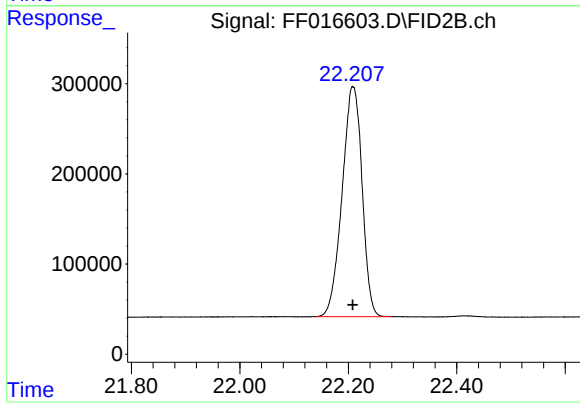
R.T.: 20.504 min
Delta R.T.: 0.000 min
Response: 7905974
Conc: 97.44 ug/ml



#17 N-OCTATRIACONTANE

R.T.: 21.263 min
Delta R.T.: 0.000 min
Response: 7124793
Conc: 97.68 ug/ml

Instrument :
FID_F
ClientSampleId :
100 TRPH STD



#18 N-TETRACONTANE

R.T.: 22.208 min
Delta R.T.: 0.000 min
Response: 6516142
Conc: 97.83 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF102925\
Data File : FF016603.D
Signal(s) : FID2B.ch
Acq On : 29 Oct 2025 10:39
Sample : 100 TRPH STD
Misc :
ALS Vial : 71 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	2.040	2.007	2.119	BB	978926	10350779	90.85%	5.767%
2	4.577	4.537	4.677	BB	1009879	10535689	92.47%	5.870%
3	6.757	6.721	6.852	BB	1040951	10655869	93.53%	5.936%
4	8.592	8.481	8.689	BB	978638	10776848	94.59%	6.004%
5	10.200	10.159	10.296	BB	961065	10807655	94.86%	6.021%
6	11.647	11.604	11.751	BB	938761	11088236	97.32%	6.177%
7	12.961	12.916	13.051	BB	949787	11393354	100.00%	6.347%
8	14.162	14.092	14.256	BB	863717	11113191	97.54%	6.191%
9	15.064	15.017	15.132	PV	697468	9733531	85.43%	5.423%
10	15.269	15.224	15.346	BB	839507	11063677	97.11%	6.164%
11	16.294	16.226	16.366	BB	807679	10732434	94.20%	5.979%
12	17.248	17.201	17.324	BB	759772	10583031	92.89%	5.896%
13	18.138	18.074	18.209	BB	722950	10372109	91.04%	5.778%
14	18.975	18.921	19.046	BB	670646	9760051	85.66%	5.437%
15	19.762	19.701	19.819	BB	613287	8984214	78.85%	5.005%
16	20.504	20.451	20.567	BB	520304	7905974	69.39%	4.405%
17	21.263	21.201	21.344	BB	372378	7124793	62.53%	3.969%
18	22.208	22.141	22.280	BBA	254474	6516142	57.19%	3.630%
Sum of corrected areas:						179497576		

FF102925.M Thu Oct 30 14:02:31 2025

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF102925\
 Data File : FF016604.D
 Signal(s) : FID2B.ch
 Acq On : 29 Oct 2025 11:08
 Operator : YP\AJ
 Sample : 50 TRPH STD
 Misc :
 ALS Vial : 72 Sample Multiplier: 1

Instrument :
 FID_F
 ClientSampleId :
 50 TRPH STD

Integration File: autoint1.e
 Quant Time: Oct 29 11:21:56 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
 Quant Title :
 QLast Update : Wed Oct 29 11:21:39 2025
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1uL
 Signal Phase : Rxi-1ms
 Signal Info : 20mx0.18mmx0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.060	5149058	50.000 ug/ml
Target Compounds			
1) N-OCTANE	2.040	5502498	50.000 ug/ml
2) N-DECANE	4.575	5574754	50.000 ug/ml
3) N-DODECANE	6.754	5627850	50.000 ug/ml
4) N-TETRADECANE	8.588	5704427	50.000 ug/ml
5) N-HEXADECANE	10.197	5717820	50.000 ug/ml
6) N-OCTADECANE	11.643	5867144	50.000 ug/ml
7) N-EICOSANE	12.956	6034989	50.000 ug/ml
8) N-DOCOSANE	14.159	5878573	50.000 ug/ml
10) N-TETRACOSANE	15.265	5848590	50.000 ug/ml
11) N-HEXACOSANE	16.290	5660622	50.000 ug/ml
12) N-OCTACOSANE	17.243	5585650	50.000 ug/ml
13) N-TRIACONTANE	18.134	5481373	50.000 ug/ml
14) N-DOTRIACONTANE	18.970	5166597	50.000 ug/ml
15) N-TETRATRIACONTANE	19.756	4752224	50.000 ug/ml
16) N-HEXATRIACONTANE	20.501	4161006	50.000 ug/ml
17) N-OCTATRIACONTANE	21.258	3731765	50.000 ug/ml
18) N-TETRACONTANE	22.205	3402327	50.000 ug/ml

(f)=RT Delta > 1/2 Window

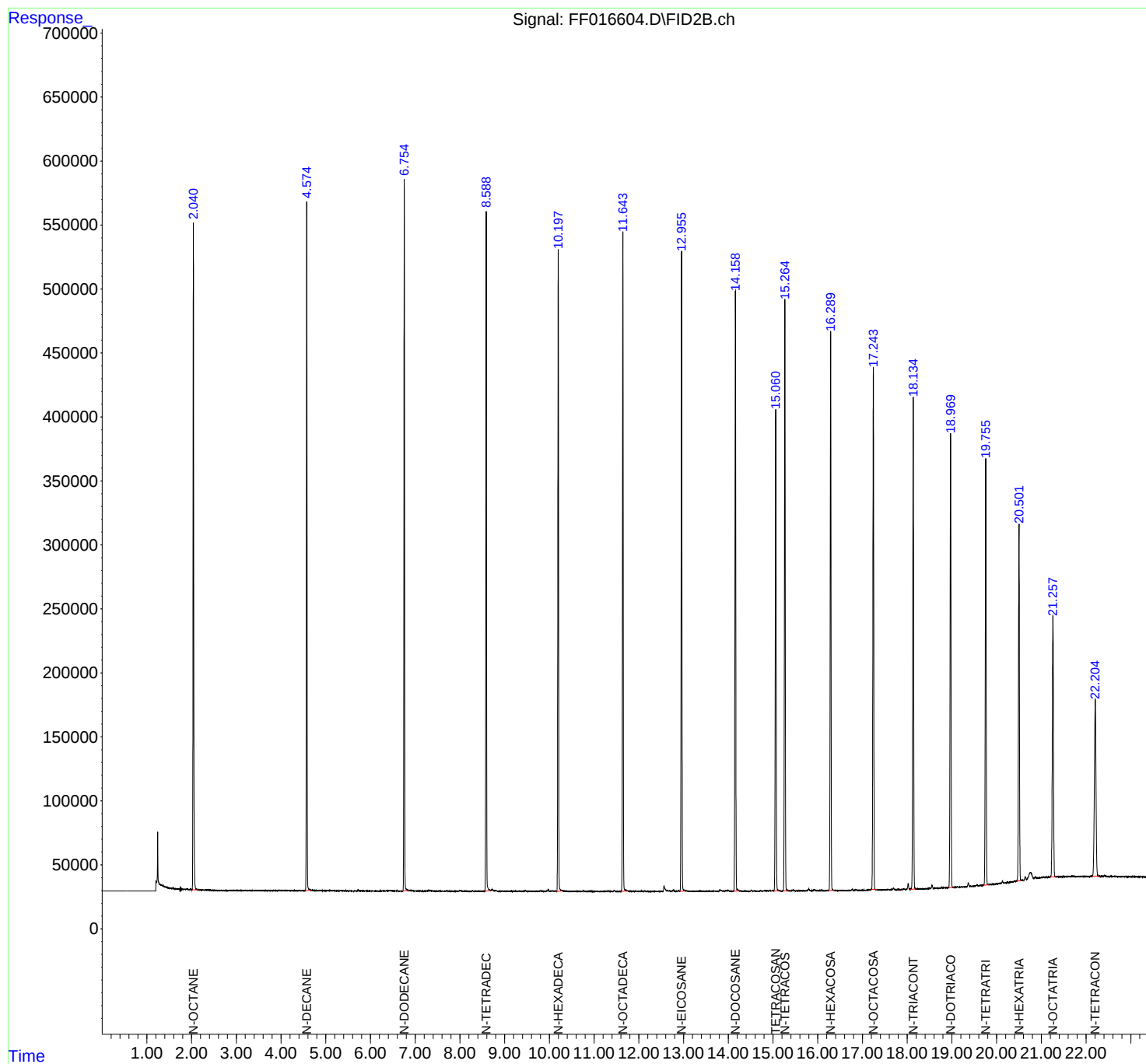
(m)=manual int.

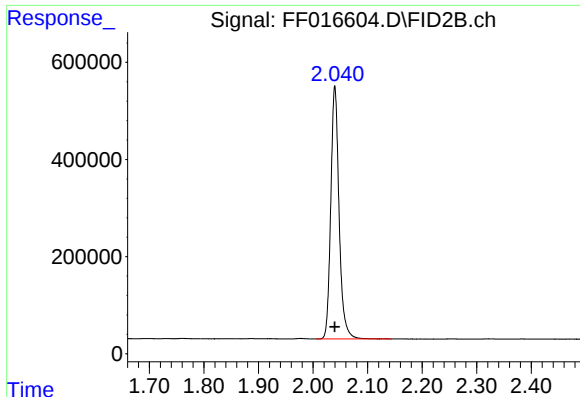
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF102925\
Data File : FF016604.D
Signal(s) : FID2B.ch
Acq On : 29 Oct 2025 11:08
Operator : YP\AJ
Sample : 50 TRPH STD
Misc :
ALS Vial : 72 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
50 TRPH STD

Integration File: autoint1.e
Quant Time: Oct 29 11:21:56 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
Quant Title :
QLast Update : Wed Oct 29 11:21:39 2025
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um

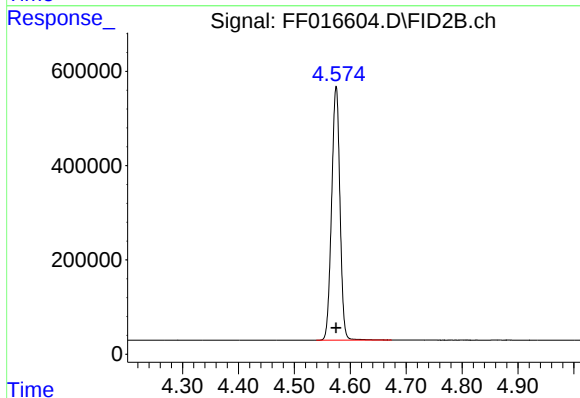




#1 N-OCTANE

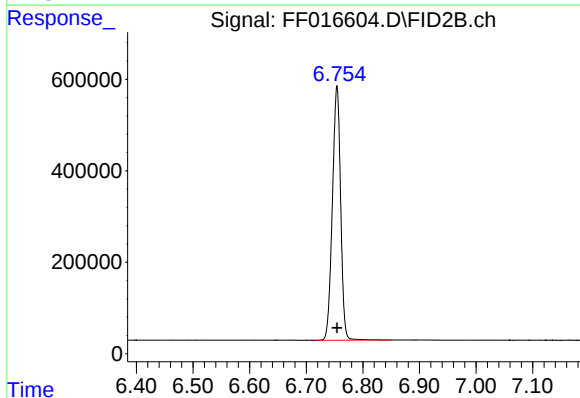
R.T.: 2.040 min
Delta R.T.: 0.000 min
Response: 5502498
Conc: 50.00 ug/ml

Instrument :
FID_F
ClientSampleId :
50 TRPH STD



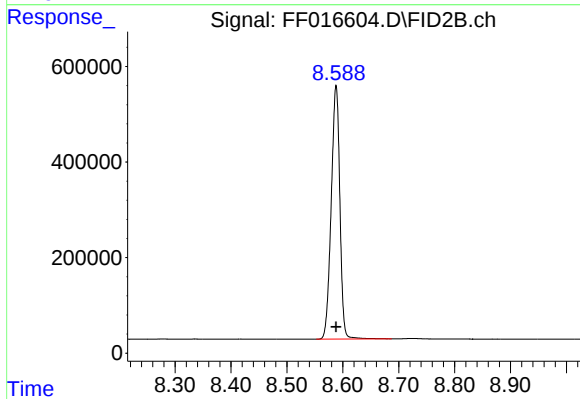
#2 N-DECANE

R.T.: 4.575 min
Delta R.T.: 0.000 min
Response: 5574754
Conc: 50.00 ug/ml



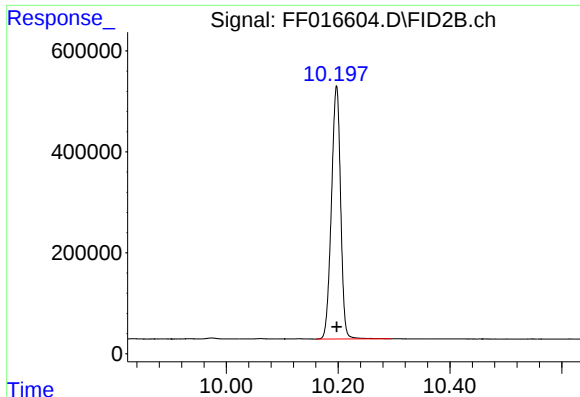
#3 N-DODECANE

R.T.: 6.754 min
Delta R.T.: 0.000 min
Response: 5627850
Conc: 50.00 ug/ml



#4 N-TETRADECANE

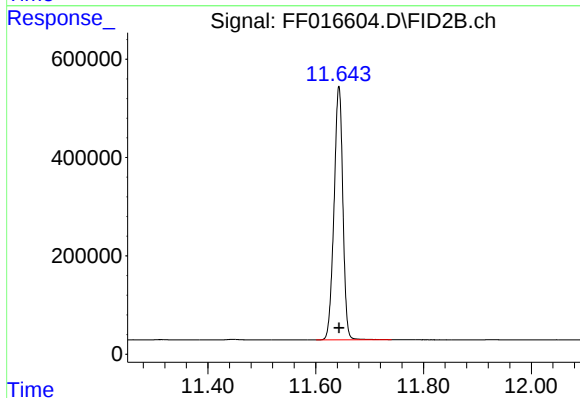
R.T.: 8.588 min
Delta R.T.: 0.000 min
Response: 5704427
Conc: 50.00 ug/ml



#5 N-HEXADECANE

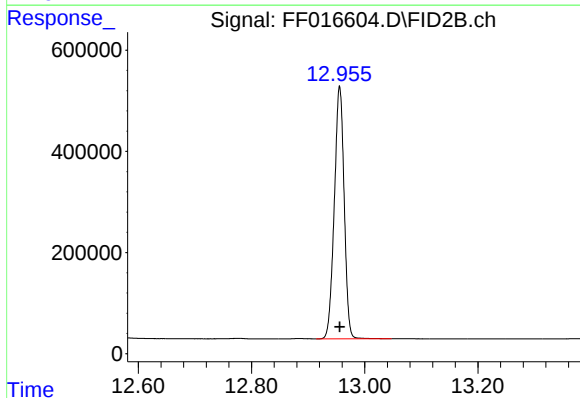
R.T.: 10.197 min
Delta R.T.: 0.000 min
Response: 5717820
Conc: 50.00 ug/ml

Instrument :
FID_F
ClientSampleId :
50 TRPH STD



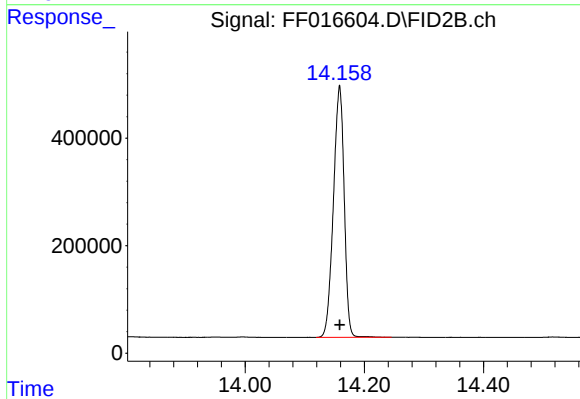
#6 N-OCTADECANE

R.T.: 11.643 min
Delta R.T.: 0.000 min
Response: 5867144
Conc: 50.00 ug/ml



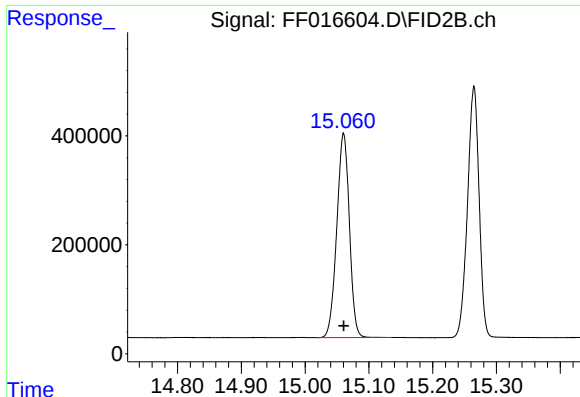
#7 N-EICOSANE

R.T.: 12.956 min
Delta R.T.: 0.000 min
Response: 6034989
Conc: 50.00 ug/ml



#8 N-DOCOSANE

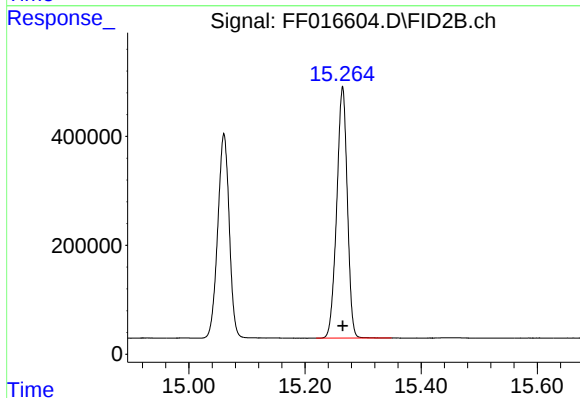
R.T.: 14.159 min
Delta R.T.: 0.000 min
Response: 5878573
Conc: 50.00 ug/ml



#9 TETRACOSANE-d50 (SURROGATE)

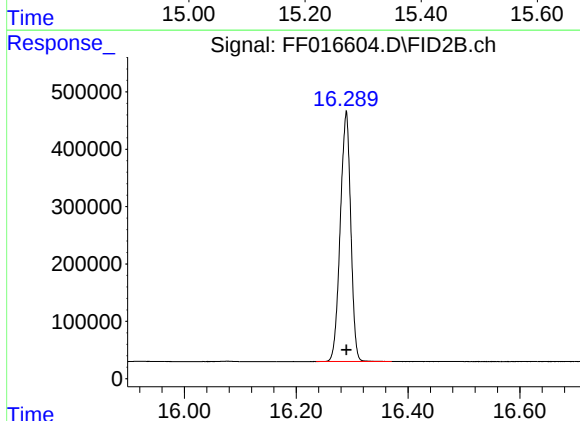
R.T.: 15.060 min
Delta R.T.: 0.000 min
Response: 5149058
Conc: 50.00 ug/ml

Instrument :
FID_F
ClientSampleId :
50 TRPH STD



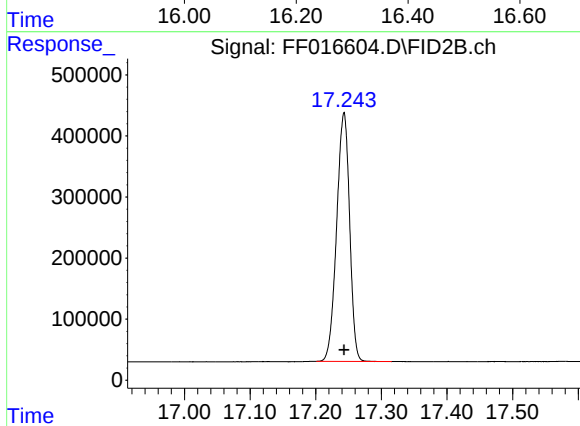
#10 N-TETRACOSANE

R.T.: 15.265 min
Delta R.T.: 0.000 min
Response: 5848590
Conc: 50.00 ug/ml



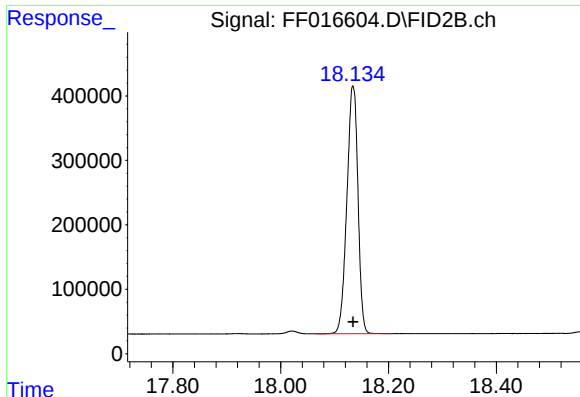
#11 N-HEXACOSANE

R.T.: 16.290 min
Delta R.T.: 0.000 min
Response: 5660622
Conc: 50.00 ug/ml



#12 N-OCTACOSANE

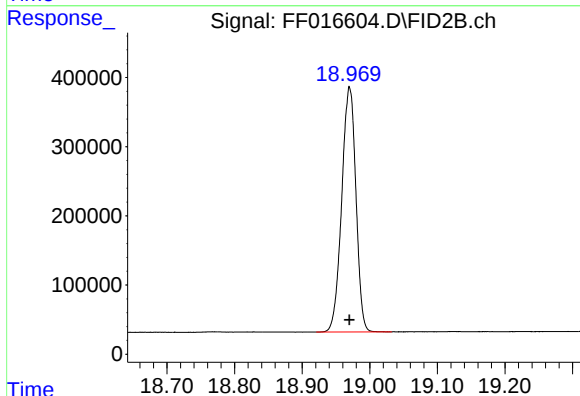
R.T.: 17.243 min
Delta R.T.: 0.000 min
Response: 5585650
Conc: 50.00 ug/ml



#13 N-TRIACONTANE

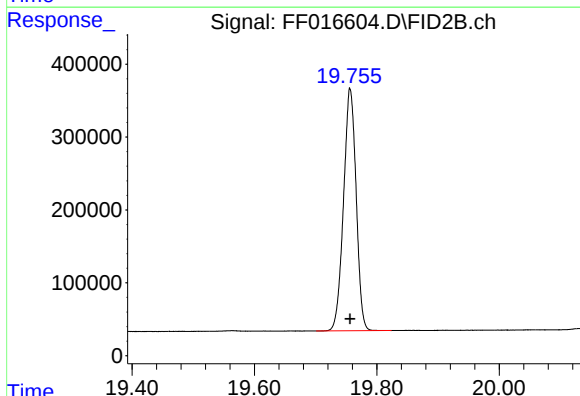
R.T.: 18.134 min
Delta R.T.: 0.000 min
Response: 5481373
Conc: 50.00 ug/ml

Instrument :
FID_F
ClientSampleId :
50 TRPH STD



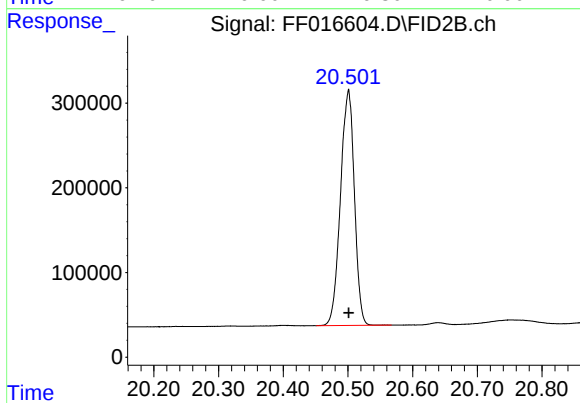
#14 N-DOTRIACONTANE

R.T.: 18.970 min
Delta R.T.: 0.000 min
Response: 5166597
Conc: 50.00 ug/ml



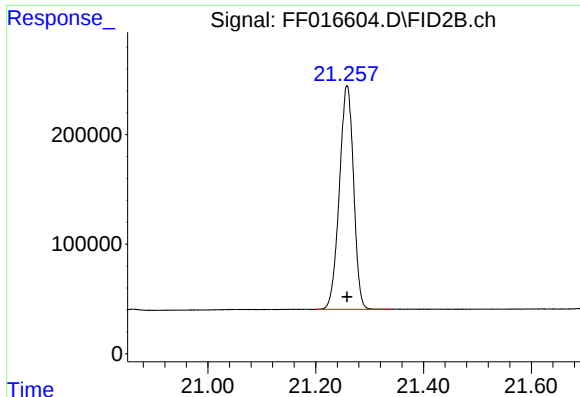
#15 N-TETRATRIACONTANE

R.T.: 19.756 min
Delta R.T.: 0.000 min
Response: 4752224
Conc: 50.00 ug/ml



#16 N-HEXATRIACONTANE

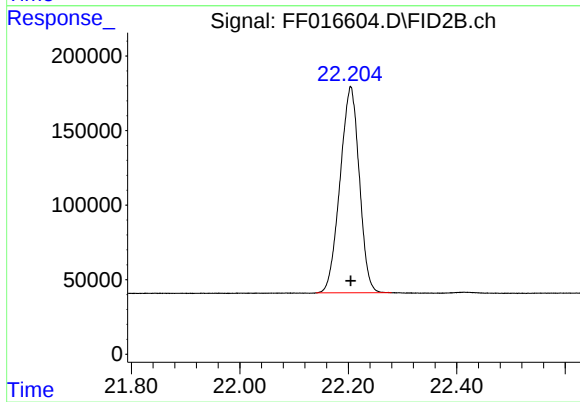
R.T.: 20.501 min
Delta R.T.: 0.000 min
Response: 4161006
Conc: 50.00 ug/ml



#17 N-OCTATRIACONTANE

R.T.: 21.258 min
Delta R.T.: 0.000 min
Response: 3731765
Conc: 50.00 ug/ml

Instrument :
FID_F
ClientSampleId :
50 TRPH STD



#18 N-TETRACONTANE

R.T.: 22.205 min
Delta R.T.: 0.000 min
Response: 3402327
Conc: 50.00 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF102925\
Data File : FF016604.D
Signal(s) : FID2B.ch
Acq On : 29 Oct 2025 11:08
Sample : 50 TRPH STD
Misc :
ALS Vial : 72 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	2.040	2.006	2.144	BB	519795	5502498	91.18%	5.801%
2	4.575	4.539	4.674	BB	537685	5574754	92.37%	5.878%
3	6.754	6.717	6.851	BB	555629	5627850	93.25%	5.934%
4	8.588	8.552	8.687	BB	530235	5704427	94.52%	6.014%
5	10.197	10.161	10.296	BB	502017	5717820	94.74%	6.028%
6	11.643	11.601	11.741	BB	516032	5867144	97.22%	6.186%
7	12.956	12.914	13.047	BB	499545	6034989	100.00%	6.363%
8	14.159	14.119	14.246	BB	468523	5878573	97.41%	6.198%
9	15.060	15.017	15.136	BB	375426	5149058	85.32%	5.429%
10	15.265	15.219	15.349	BB	460953	5848590	96.91%	6.166%
11	16.290	16.236	16.371	BB	434184	5660622	93.80%	5.968%
12	17.243	17.201	17.316	BB	407179	5585650	92.55%	5.889%
13	18.134	18.066	18.206	BB	384172	5481373	90.83%	5.779%
14	18.970	18.921	19.032	BB	352548	5166597	85.61%	5.447%
15	19.756	19.701	19.824	BB	333464	4752224	78.74%	5.010%
16	20.501	20.451	20.567	BB	277826	4161006	68.95%	4.387%
17	21.258	21.201	21.341	BB	204060	3731765	61.84%	3.934%
18	22.205	22.141	22.280	BBA	138519	3402327	56.38%	3.587%
Sum of corrected areas:							94847264	

FF102925.M Thu Oct 30 14:03:00 2025

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF102925\
 Data File : FF016605.D
 Signal(s) : FID2B.ch
 Acq On : 29 Oct 2025 11:38
 Operator : YP\AJ
 Sample : 20 TRPH STD
 Misc :
 ALS Vial : 73 Sample Multiplier: 1

Instrument :
 FID_F
 ClientSampleId :
 20 TRPH STD

Integration File: autoint1.e
 Quant Time: Oct 29 11:52:48 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
 Quant Title :
 QLast Update : Wed Oct 29 11:52:39 2025
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1uL
 Signal Phase : Rxi-1ms
 Signal Info : 20mx0.18mmx0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.058	2131379	20.836 ug/ml
Target Compounds			
1) N-OCTANE	2.040	2266549	20.801 ug/ml
2) N-DECANE	4.574	2268475	20.605 ug/ml
3) N-DODECANE	6.752	2288864	20.586 ug/ml
4) N-TETRADECANE	8.586	2313575	20.563 ug/ml
5) N-HEXADECANE	10.195	2319047	20.560 ug/ml
6) N-OCTADECANE	11.641	2398012	20.665 ug/ml
7) N-EICOSANE	12.954	2484512	20.770 ug/ml
8) N-DOCOSANE	14.155	2433628	20.837 ug/ml
10) N-TETRACOSANE	15.262	2421913	20.836 ug/ml
11) N-HEXACOSANE	16.287	2346236	20.834 ug/ml
12) N-OCTACOSANE	17.241	2324789	20.895 ug/ml
13) N-TRIACONTANE	18.132	2291884	20.966 ug/ml
14) N-DOTRIACONTANE	18.969	2178741	21.093 ug/ml
15) N-TETRATRIACONTANE	19.755	1997939	21.047 ug/ml
16) N-HEXATRIACONTANE	20.499	1733916	20.893 ug/ml
17) N-OCTATRIACONTANE	21.255	1562428	20.925 ug/ml
18) N-TETRACONTANE	22.201	1392566	20.596 ug/ml

(f)=RT Delta > 1/2 Window

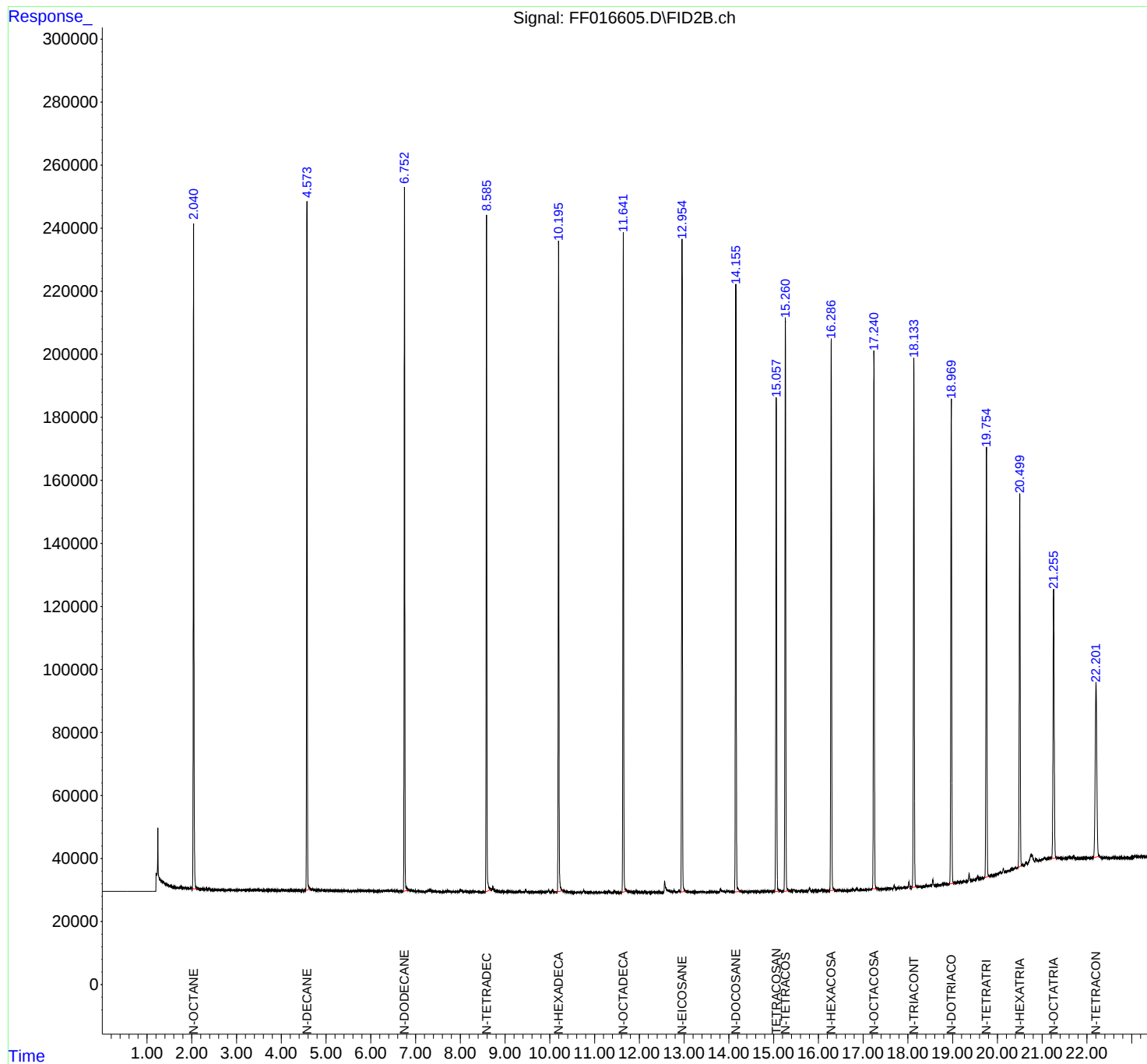
(m)=manual int.

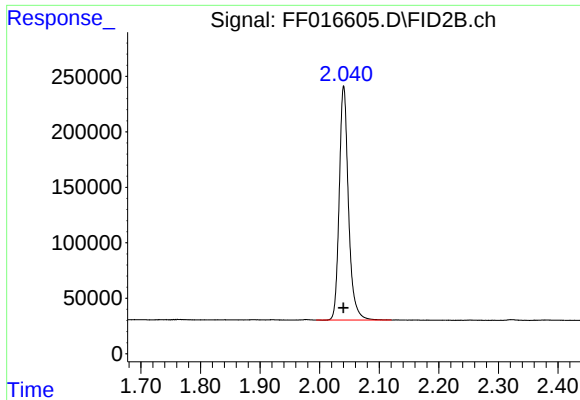
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF102925\
Data File : FF016605.D
Signal(s) : FID2B.ch
Acq On : 29 Oct 2025 11:38
Operator : YP\AJ
Sample : 20 TRPH STD
Misc :
ALS Vial : 73 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
20 TRPH STD

Integration File: autoint1.e
Quant Time: Oct 29 11:52:48 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
Quant Title :
QLast Update : Wed Oct 29 11:52:39 2025
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um

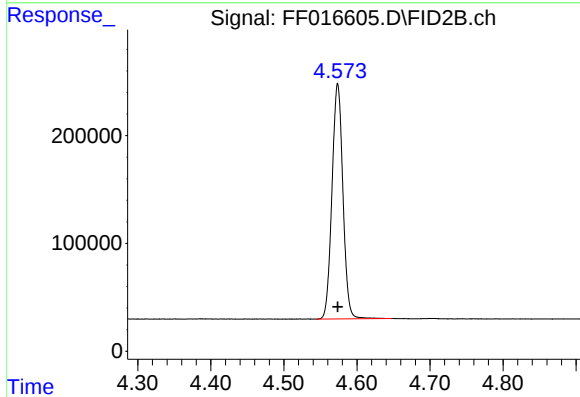




#1 N-OCTANE

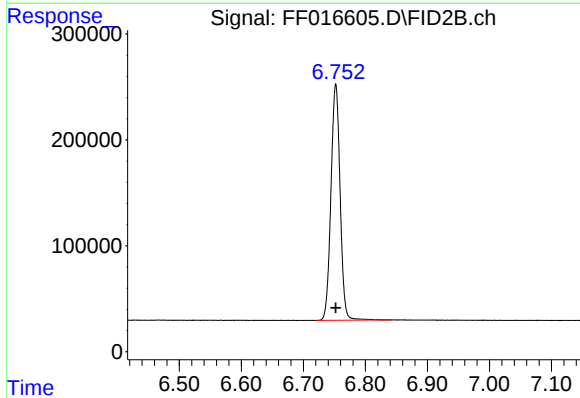
R.T.: 2.040 min
Delta R.T.: 0.000 min
Response: 2266549
Conc: 20.80 ug/ml

Instrument :
FID_F
ClientSampleId :
20 TRPH STD



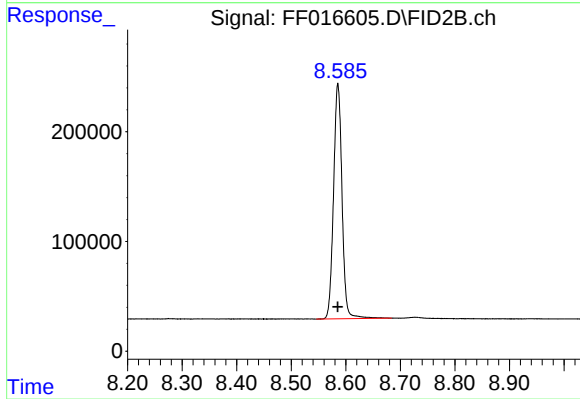
#2 N-DECANE

R.T.: 4.574 min
Delta R.T.: 0.000 min
Response: 2268475
Conc: 20.61 ug/ml



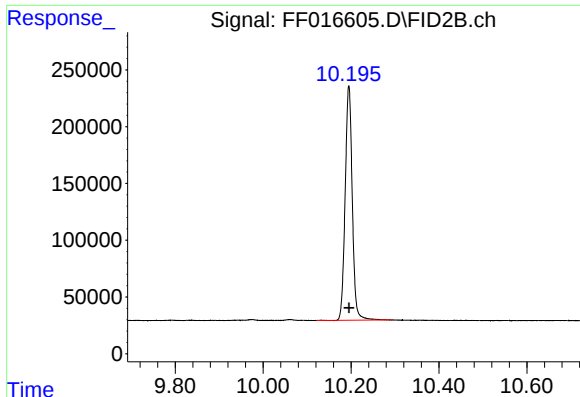
#3 N-DODECANE

R.T.: 6.752 min
Delta R.T.: 0.000 min
Response: 2288864
Conc: 20.59 ug/ml



#4 N-TETRADECANE

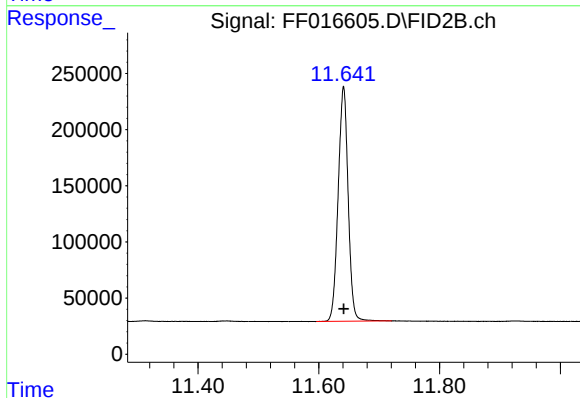
R.T.: 8.586 min
Delta R.T.: 0.000 min
Response: 2313575
Conc: 20.56 ug/ml



#5 N-HEXADECANE

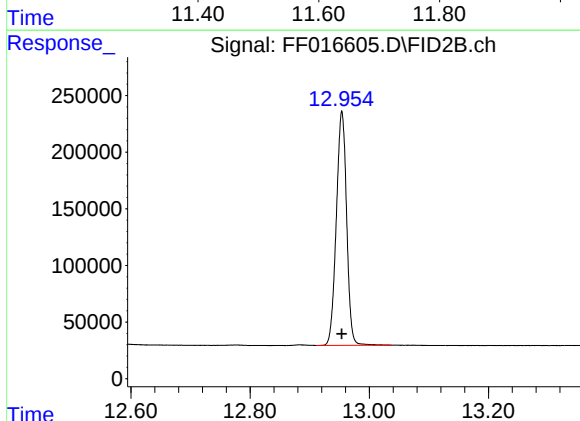
R.T.: 10.195 min
Delta R.T.: 0.000 min
Response: 2319047
Conc: 20.56 ug/ml

Instrument :
FID_F
ClientSampleId :
20 TRPH STD



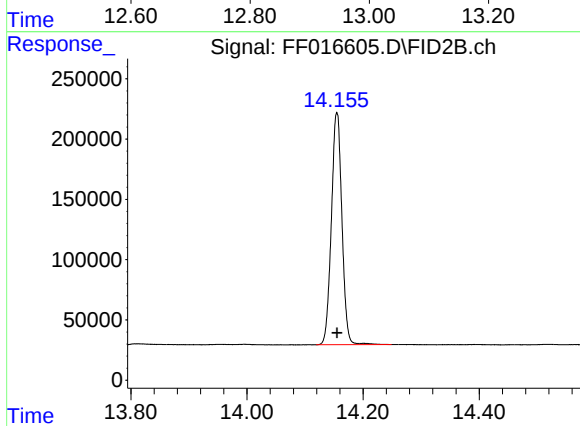
#6 N-OCTADECANE

R.T.: 11.641 min
Delta R.T.: 0.000 min
Response: 2398012
Conc: 20.67 ug/ml



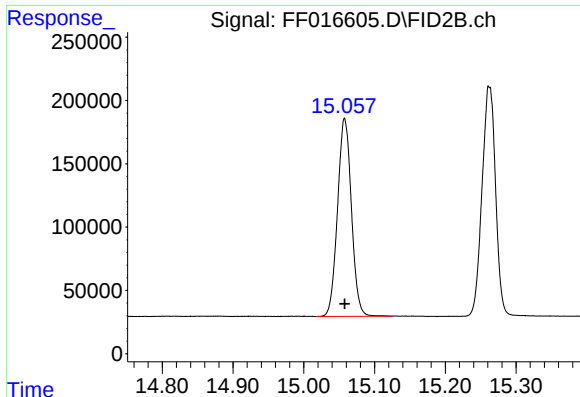
#7 N-EICOSANE

R.T.: 12.954 min
Delta R.T.: 0.000 min
Response: 2484512
Conc: 20.77 ug/ml



#8 N-DOCOSANE

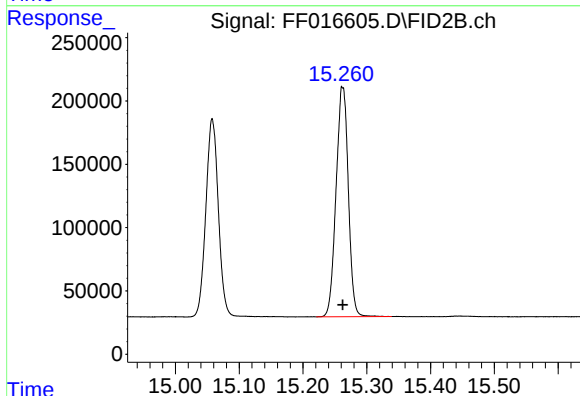
R.T.: 14.155 min
Delta R.T.: 0.000 min
Response: 2433628
Conc: 20.84 ug/ml



#9 TETRACOSANE-d50 (SURROGATE)

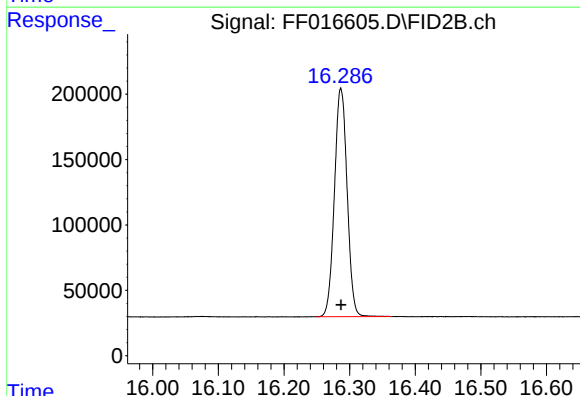
R.T.: 15.058 min
Delta R.T.: 0.000 min
Response: 2131379
Conc: 20.84 ug/ml

Instrument :
FID_F
ClientSampleId :
20 TRPH STD



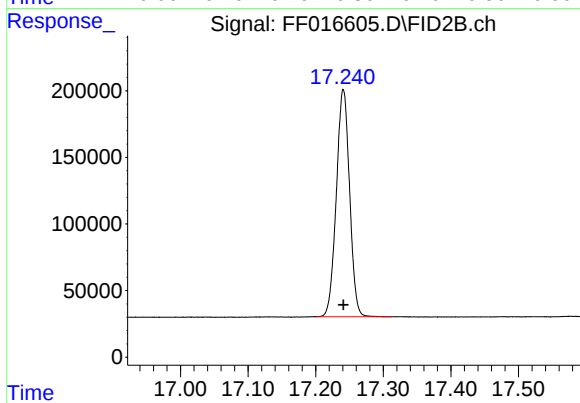
#10 N-TETRACOSANE

R.T.: 15.262 min
Delta R.T.: 0.000 min
Response: 2421913
Conc: 20.84 ug/ml



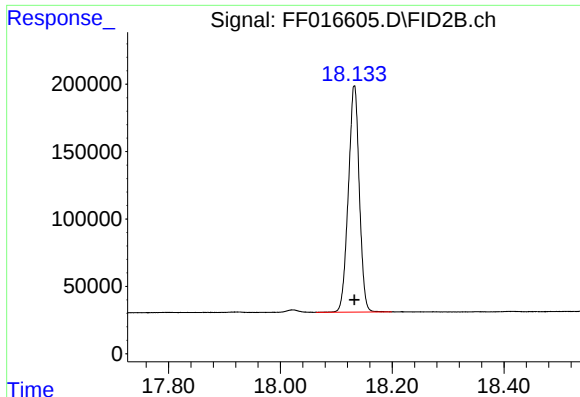
#11 N-HEXACOSANE

R.T.: 16.287 min
Delta R.T.: 0.000 min
Response: 2346236
Conc: 20.83 ug/ml



#12 N-OCTACOSANE

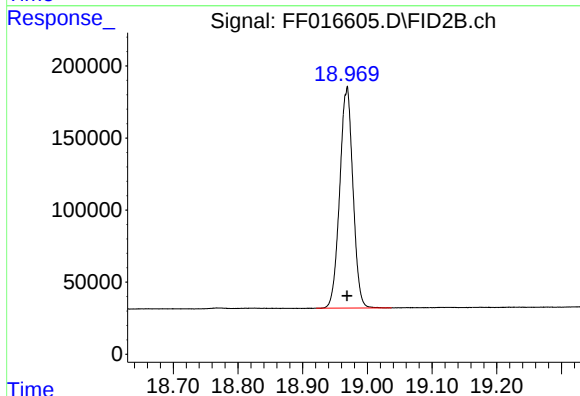
R.T.: 17.241 min
Delta R.T.: 0.000 min
Response: 2324789
Conc: 20.89 ug/ml



#13 N-TRIACONTANE

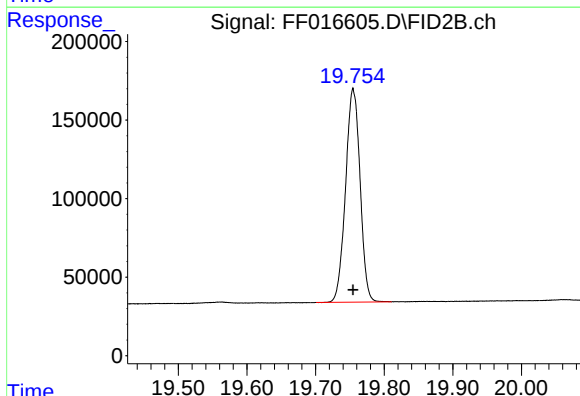
R.T.: 18.132 min
Delta R.T.: 0.000 min
Response: 2291884
Conc: 20.97 ug/ml

Instrument :
FID_F
ClientSampleId :
20 TRPH STD



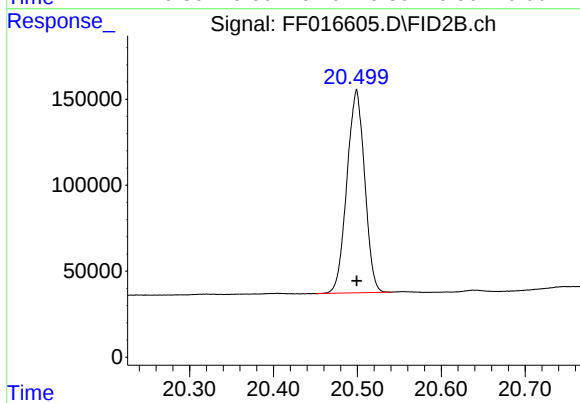
#14 N-DOTRIACONTANE

R.T.: 18.969 min
Delta R.T.: 0.000 min
Response: 2178741
Conc: 21.09 ug/ml



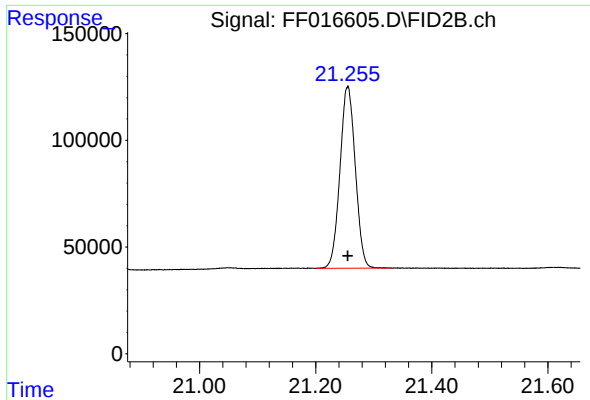
#15 N-TETRATRIACONTANE

R.T.: 19.755 min
Delta R.T.: 0.000 min
Response: 1997939
Conc: 21.05 ug/ml



#16 N-HEXATRIACONTANE

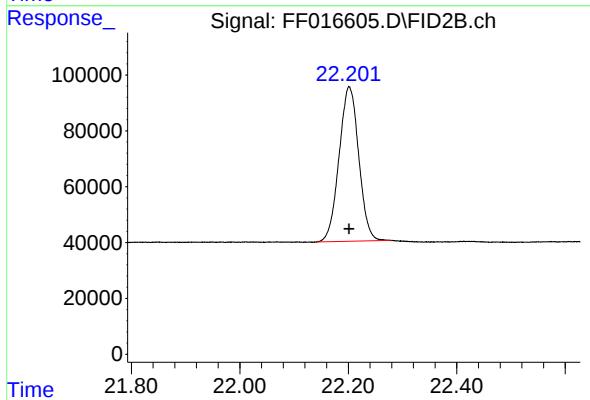
R.T.: 20.499 min
Delta R.T.: 0.000 min
Response: 1733916
Conc: 20.89 ug/ml



#17 N-OCTATRIACONTANE

R.T.: 21.255 min
Delta R.T.: 0.000 min
Response: 1562428
Conc: 20.92 ug/ml

Instrument :
FID_F
ClientSampleId :
20 TRPH STD



#18 N-TETRACONTANE

R.T.: 22.201 min
Delta R.T.: 0.000 min
Response: 1392566
Conc: 20.60 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF102925\
Data File : FF016605.D
Signal(s) : FID2B.ch
Acq On : 29 Oct 2025 11:38
Sample : 20 TRPH STD
Misc :
ALS Vial : 73 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	2.040	1.994	2.121	BB	211050	2266549	91.23%	5.789%
2	4.574	4.544	4.647	BB	218188	2268475	91.30%	5.794%
3	6.752	6.721	6.842	BB	223344	2288864	92.13%	5.846%
4	8.586	8.546	8.684	BB	214310	2313575	93.12%	5.909%
5	10.195	10.121	10.292	BB	206669	2319047	93.34%	5.923%
6	11.641	11.596	11.721	BB	209130	2398012	96.52%	6.124%
7	12.954	12.911	13.037	BB	206941	2484512	100.00%	6.345%
8	14.155	14.119	14.249	BB	192424	2433628	97.95%	6.215%
9	15.058	15.017	15.124	BB	156454	2131379	85.79%	5.444%
10	15.262	15.221	15.339	BB	180639	2421913	97.48%	6.186%
11	16.287	16.249	16.364	BB	174224	2346236	94.43%	5.992%
12	17.241	17.201	17.312	BB	170677	2324789	93.57%	5.937%
13	18.132	18.064	18.199	BB	167931	2291884	92.25%	5.853%
14	18.969	18.921	19.037	BB	154148	2178741	87.69%	5.564%
15	19.755	19.701	19.811	BB	135819	1997939	80.42%	5.103%
16	20.499	20.451	20.541	BV	118072	1733916	69.79%	4.428%
17	21.255	21.201	21.331	BB	85428	1562428	62.89%	3.990%
18	22.201	22.141	22.280	BBA	55461	1392566	56.05%	3.557%
Sum of corrected areas:							39154453	

FF102925.M Thu Oct 30 14:03:23 2025

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF102925\
 Data File : FF016606.D
 Signal(s) : FID2B.ch
 Acq On : 29 Oct 2025 12:07
 Operator : YP\AJ
 Sample : 10 TRPH STD
 Misc :
 ALS Vial : 74 Sample Multiplier: 1

Instrument :
 FID_F
 ClientSampleId :
 10 TRPH STD

Integration File: autoint1.e
 Quant Time: Oct 29 12:22:37 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
 Quant Title :
 QLast Update : Wed Oct 29 12:22:28 2025
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1uL
 Signal Phase : Rxi-1ms
 Signal Info : 20mx0.18mmx0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.057	1053130	10.220 ug/ml
Target Compounds			
1) N-OCTANE	2.041	1110103	10.140 ug/ml
2) N-DECANE	4.573	1094769	9.958 ug/ml
3) N-DODECANE	6.752	1100538	9.923 ug/ml
4) N-TETRADECANE	8.585	1102080	9.846 ug/ml
5) N-HEXADECANE	10.194	1117179	9.928 ug/ml
6) N-OCTADECANE	11.640	1168812	10.054 ug/ml
7) N-EICOSANE	12.952	1230636	10.214 ug/ml
8) N-DOCOSANE	14.154	1199081	10.199 ug/ml
10) N-TETRACOSANE	15.261	1195246	10.211 ug/ml
11) N-HEXACOSANE	16.286	1154953	10.191 ug/ml
12) N-OCTACOSANE	17.240	1148793	10.242 ug/ml
13) N-TRIACONTANE	18.131	1139029	10.312 ug/ml
14) N-DOTRIACONTANE	18.967	1089648	10.406 ug/ml
15) N-TETRATRIACONTANE	19.755	997160	10.374 ug/ml
16) N-HEXATRIACONTANE	20.499	861823	10.286 ug/ml
17) N-OCTATRIACONTANE	21.257	776718	10.299 ug/ml
18) N-TETRACONTANE	22.201	679416	10.037 ug/ml

(f)=RT Delta > 1/2 Window

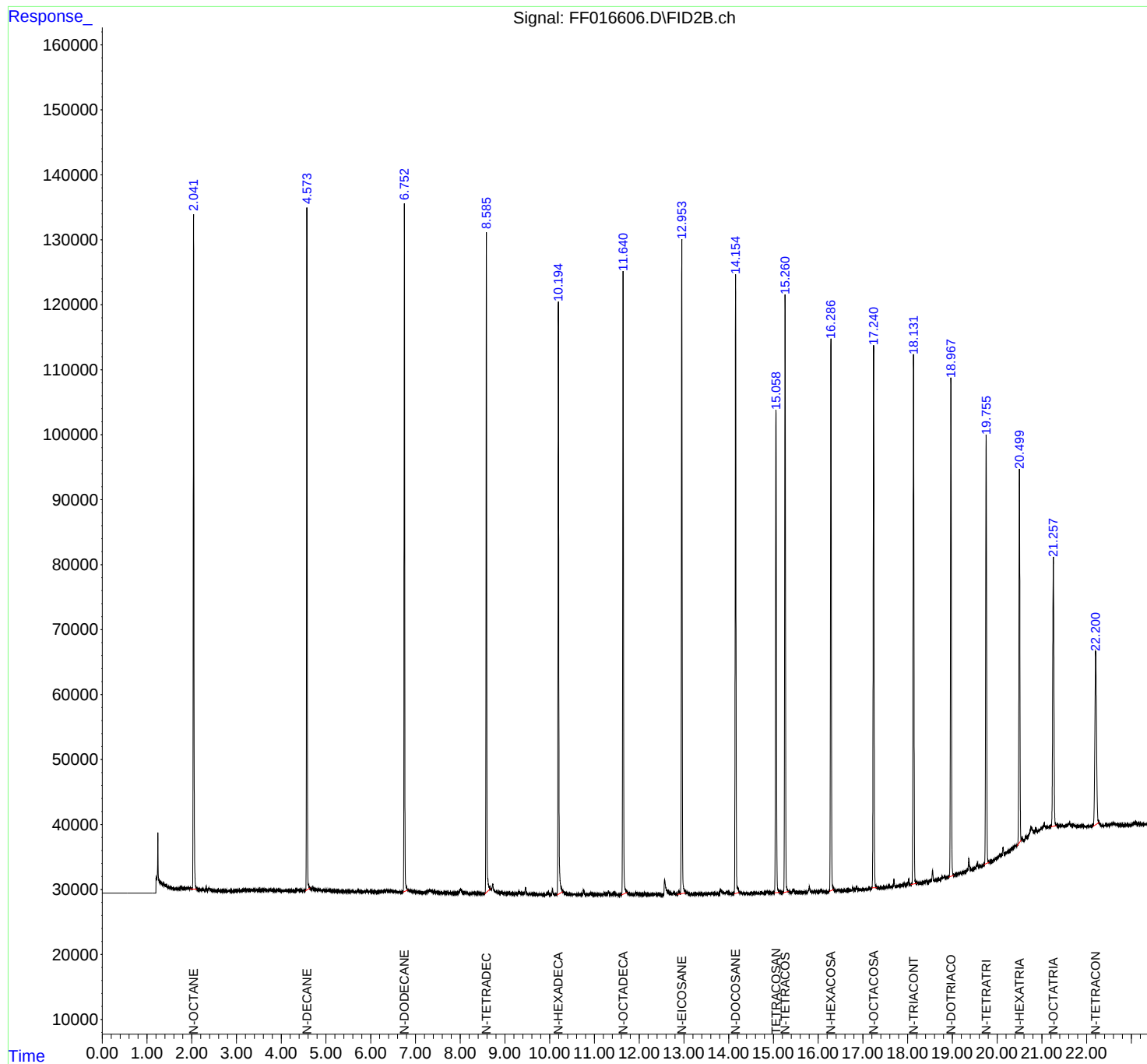
(m)=manual int.

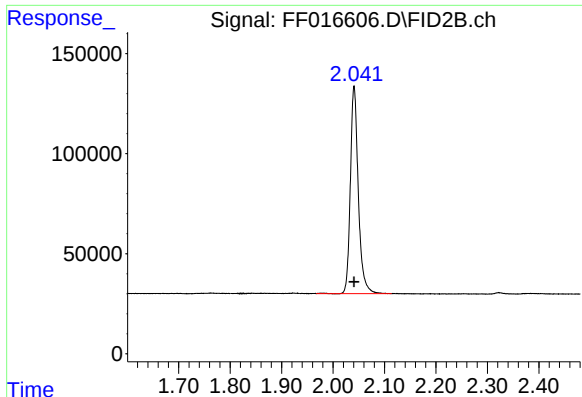
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF102925\
Data File : FF016606.D
Signal(s) : FID2B.ch
Acq On : 29 Oct 2025 12:07
Operator : YP\AJ
Sample : 10 TRPH STD
Misc :
ALS Vial : 74 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
10 TRPH STD

Integration File: autoint1.e
Quant Time: Oct 29 12:22:37 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
Quant Title :
QLast Update : Wed Oct 29 12:22:28 2025
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um

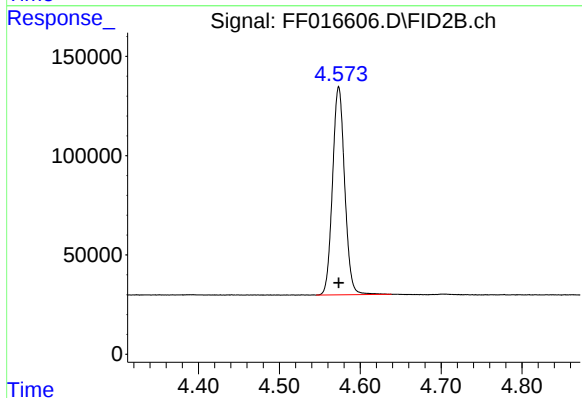




#1 N-OCTANE

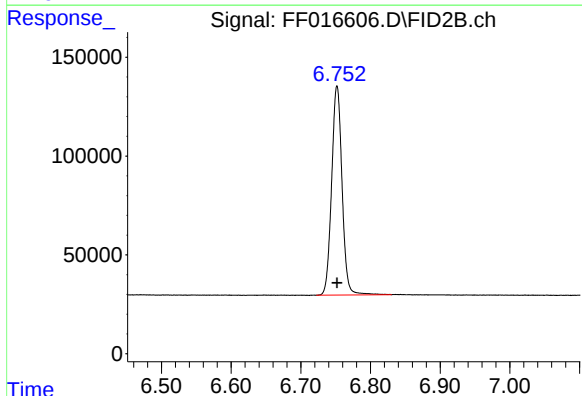
R.T.: 2.041 min
Delta R.T.: 0.000 min
Response: 1110103
Conc: 10.14 ug/ml

Instrument :
FID_F
ClientSampleId :
10 TRPH STD



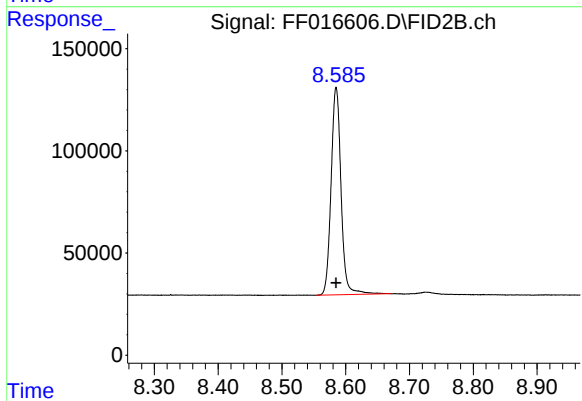
#2 N-DECANE

R.T.: 4.573 min
Delta R.T.: 0.000 min
Response: 1094769
Conc: 9.96 ug/ml



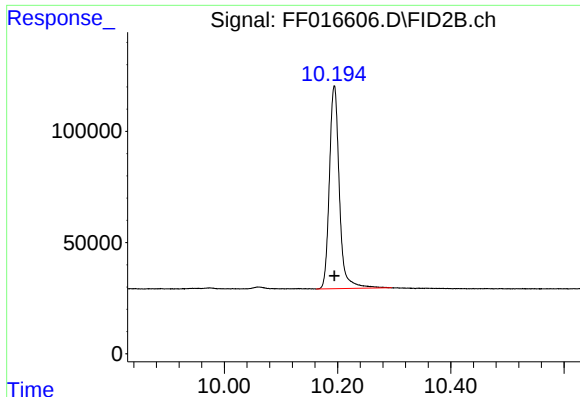
#3 N-DODECANE

R.T.: 6.752 min
Delta R.T.: 0.000 min
Response: 1100538
Conc: 9.92 ug/ml



#4 N-TETRADECANE

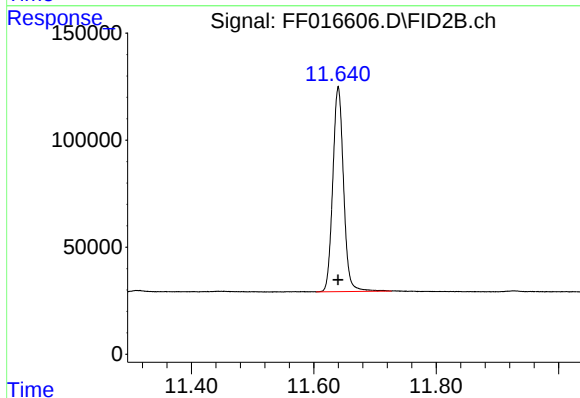
R.T.: 8.585 min
Delta R.T.: 0.000 min
Response: 1102080
Conc: 9.85 ug/ml



#5 N-HEXADECANE

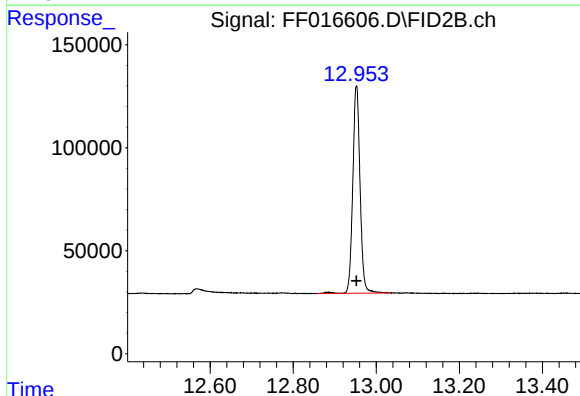
R.T.: 10.194 min
Delta R.T.: 0.000 min
Response: 1117179
Conc: 9.93 ug/ml

Instrument :
FID_F
ClientSampleId :
10 TRPH STD



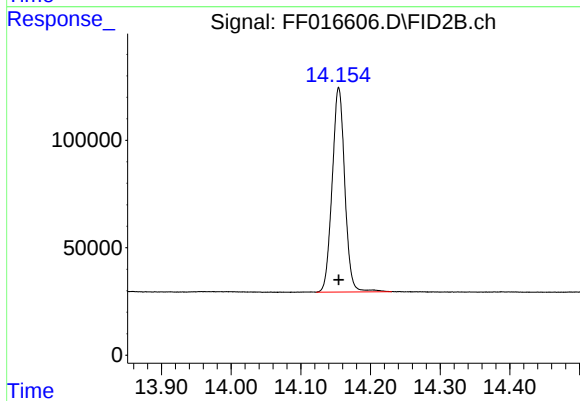
#6 N-OCTADECANE

R.T.: 11.640 min
Delta R.T.: 0.000 min
Response: 1168812
Conc: 10.05 ug/ml



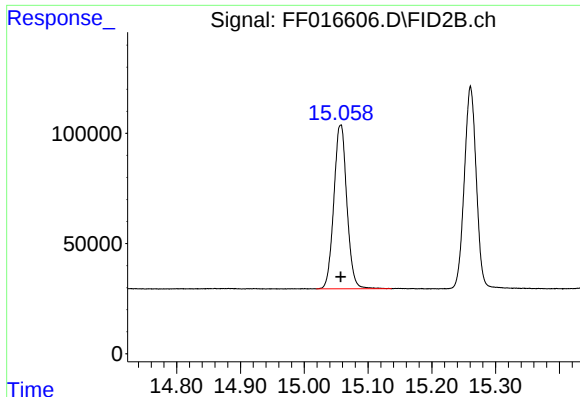
#7 N-EICOSANE

R.T.: 12.952 min
Delta R.T.: 0.000 min
Response: 1230636
Conc: 10.21 ug/ml



#8 N-DOCOSANE

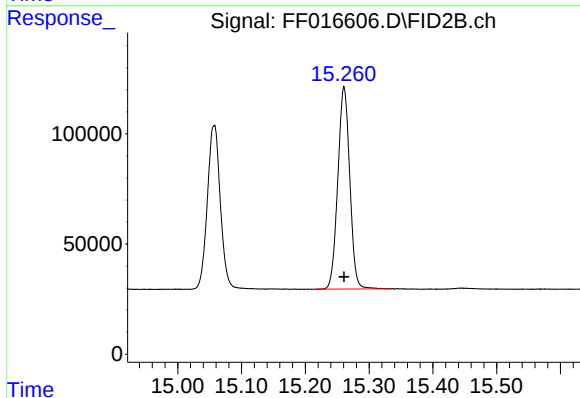
R.T.: 14.154 min
Delta R.T.: 0.000 min
Response: 1199081
Conc: 10.20 ug/ml



#9 TETRACOSANE-d50 (SURROGATE)

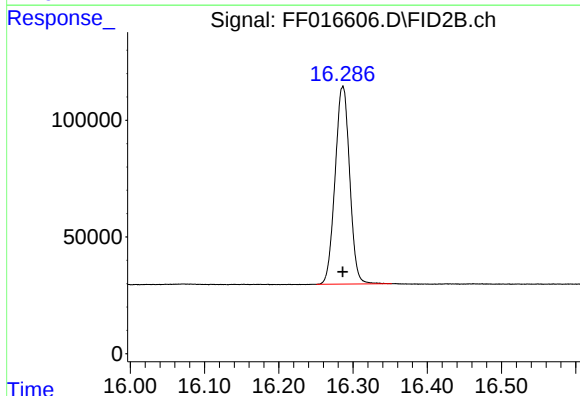
R.T.: 15.057 min
Delta R.T.: 0.000 min
Response: 1053130
Conc: 10.22 ug/ml

Instrument :
FID_F
ClientSampleId :
10 TRPH STD



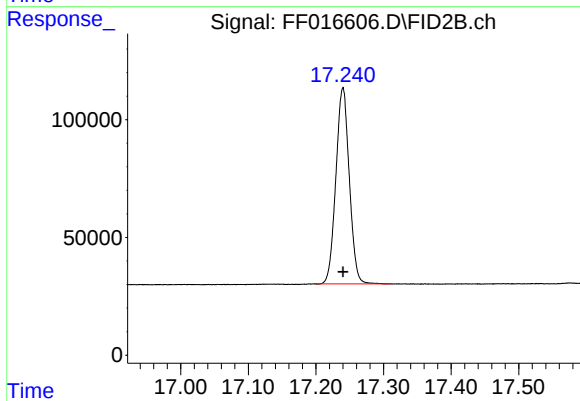
#10 N-TETRACOSANE

R.T.: 15.261 min
Delta R.T.: 0.000 min
Response: 1195246
Conc: 10.21 ug/ml



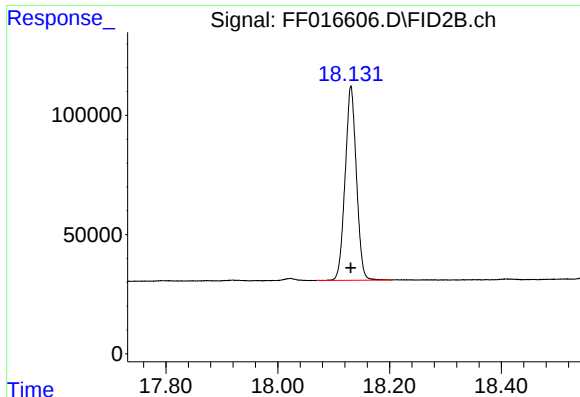
#11 N-HEXACOSANE

R.T.: 16.286 min
Delta R.T.: 0.000 min
Response: 1154953
Conc: 10.19 ug/ml



#12 N-OCTACOSANE

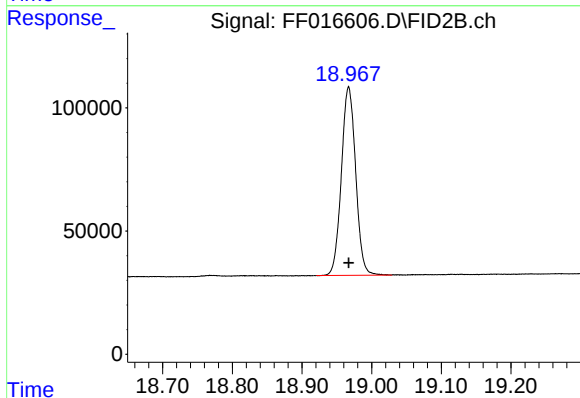
R.T.: 17.240 min
Delta R.T.: 0.000 min
Response: 1148793
Conc: 10.24 ug/ml



#13 N-TRIACONTANE

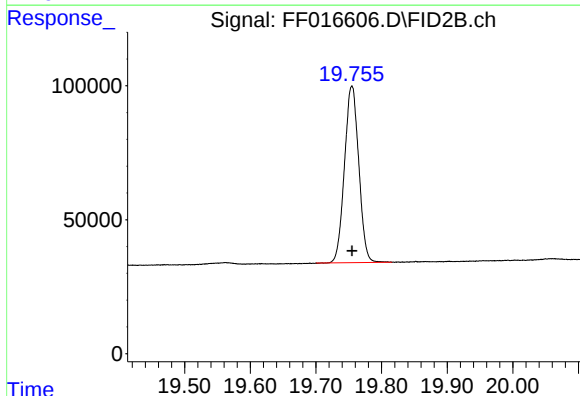
R.T.: 18.131 min
Delta R.T.: 0.000 min
Response: 1139029
Conc: 10.31 ug/ml

Instrument :
FID_F
ClientSampleId :
10 TRPH STD



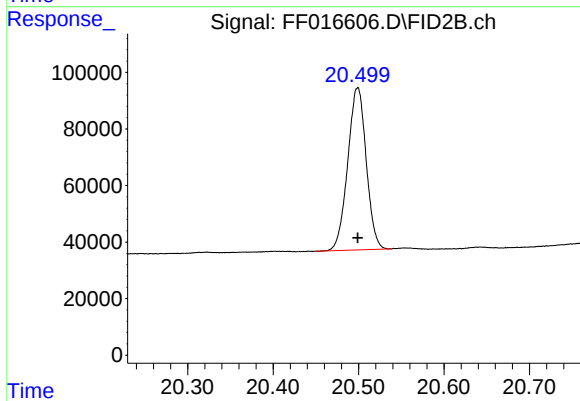
#14 N-DOTRIACONTANE

R.T.: 18.967 min
Delta R.T.: 0.000 min
Response: 1089648
Conc: 10.41 ug/ml



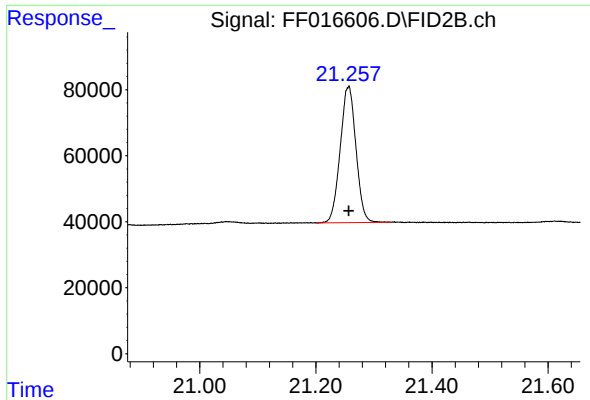
#15 N-TETRATRIACONTANE

R.T.: 19.755 min
Delta R.T.: 0.000 min
Response: 997160
Conc: 10.37 ug/ml



#16 N-HEXATRIACONTANE

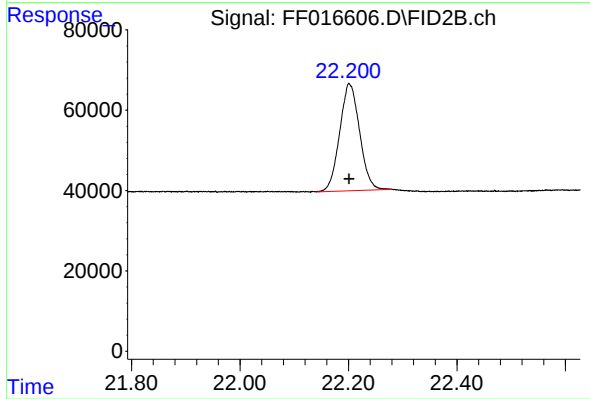
R.T.: 20.499 min
Delta R.T.: 0.000 min
Response: 861823
Conc: 10.29 ug/ml



#17 N-OCTATRIACONTANE

R.T.: 21.257 min
Delta R.T.: 0.000 min
Response: 776718
Conc: 10.30 ug/ml

Instrument :
FID_F
ClientSampleId :
10 TRPH STD



#18 N-TETRACONTANE

R.T.: 22.201 min
Delta R.T.: 0.000 min
Response: 679416
Conc: 10.04 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF102925\
Data File : FF016606.D
Signal(s) : FID2B.ch
Acq On : 29 Oct 2025 12:07
Sample : 10 TRPH STD
Misc :
ALS Vial : 74 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	2.041	1.967	2.114	BB	103768	1110103	90.21%	5.776%
2	4.573	4.545	4.639	BB	104878	1094769	88.96%	5.696%
3	6.752	6.722	6.830	BB	105867	1100538	89.43%	5.726%
4	8.585	8.554	8.672	BB	101529	1102080	89.55%	5.734%
5	10.194	10.162	10.295	BB	91242	1117179	90.78%	5.813%
6	11.640	11.604	11.727	BB	95776	1168812	94.98%	6.082%
7	12.952	12.855	13.037	BB	100675	1230636	100.00%	6.403%
8	14.154	14.122	14.230	BB	95252	1199081	97.44%	6.239%
9	15.057	15.019	15.137	BB	74231	1053130	85.58%	5.480%
10	15.261	15.217	15.335	BB	91744	1195246	97.12%	6.219%
11	16.286	16.250	16.352	BB	84900	1154953	93.85%	6.009%
12	17.240	17.200	17.312	BB	83436	1148793	93.35%	5.977%
13	18.131	18.069	18.204	BB	81386	1139029	92.56%	5.927%
14	18.967	18.920	19.029	BB	76640	1089648	88.54%	5.670%
15	19.755	19.700	19.815	BB	65959	997160	81.03%	5.188%
16	20.499	20.450	20.539	BV	57248	861823	70.03%	4.484%
17	21.257	21.200	21.330	BB	41494	776718	63.12%	4.041%
18	22.201	22.140	22.280	BBA	26675	679416	55.21%	3.535%
Sum of corrected areas:							19219111	

FF102925.M Thu Oct 30 14:03:44 2025

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF102925\
 Data File : FF016607.D
 Signal(s) : FID2B.ch
 Acq On : 29 Oct 2025 12:37
 Operator : YP\AJ
 Sample : 5 TRPH STD
 Misc :
 ALS Vial : 75 Sample Multiplier: 1

Instrument :
 FID_F
 ClientSampleId :
 5 TRPH STD

Integration File: autoint1.e
 Quant Time: Oct 29 12:47:36 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
 Quant Title :
 QLast Update : Wed Oct 29 12:47:26 2025
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1uL
 Signal Phase : Rxi-1ms
 Signal Info : 20mx0.18mmx0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.056	550877	5.273 ug/ml
Target Compounds			
1) N-OCTANE	2.042	585385	5.274 ug/ml
2) N-DECANE	4.574	567417	5.128 ug/ml
3) N-DODECANE	6.753	559098	5.033 ug/ml
4) N-TETRADECANE	8.586	554115	4.960 ug/ml
5) N-HEXADECANE	10.195	558414	4.970 ug/ml
6) N-OCTADECANE	11.640	600673	5.133 ug/ml
7) N-EICOSANE	12.953	643049	5.266 ug/ml
8) N-DOCOSANE	14.154	628663	5.274 ug/ml
10) N-TETRACOSANE	15.261	621091	5.242 ug/ml
11) N-HEXACOSANE	16.287	605262	5.269 ug/ml
12) N-OCTACOSANE	17.240	605577	5.314 ug/ml
13) N-TRIACONTANE	18.131	599711	5.338 ug/ml
14) N-DOTRIACONTANE	18.967	585750	5.464 ug/ml
15) N-TETRATRIACONTANE	19.754	534045	5.435 ug/ml
16) N-HEXATRIACONTANE	20.498	461922	5.402 ug/ml
17) N-OCTATRIACONTANE	21.256	410442	5.348 ug/ml
18) N-TETRACONTANE	22.204	352301	5.162 ug/ml

(f)=RT Delta > 1/2 Window

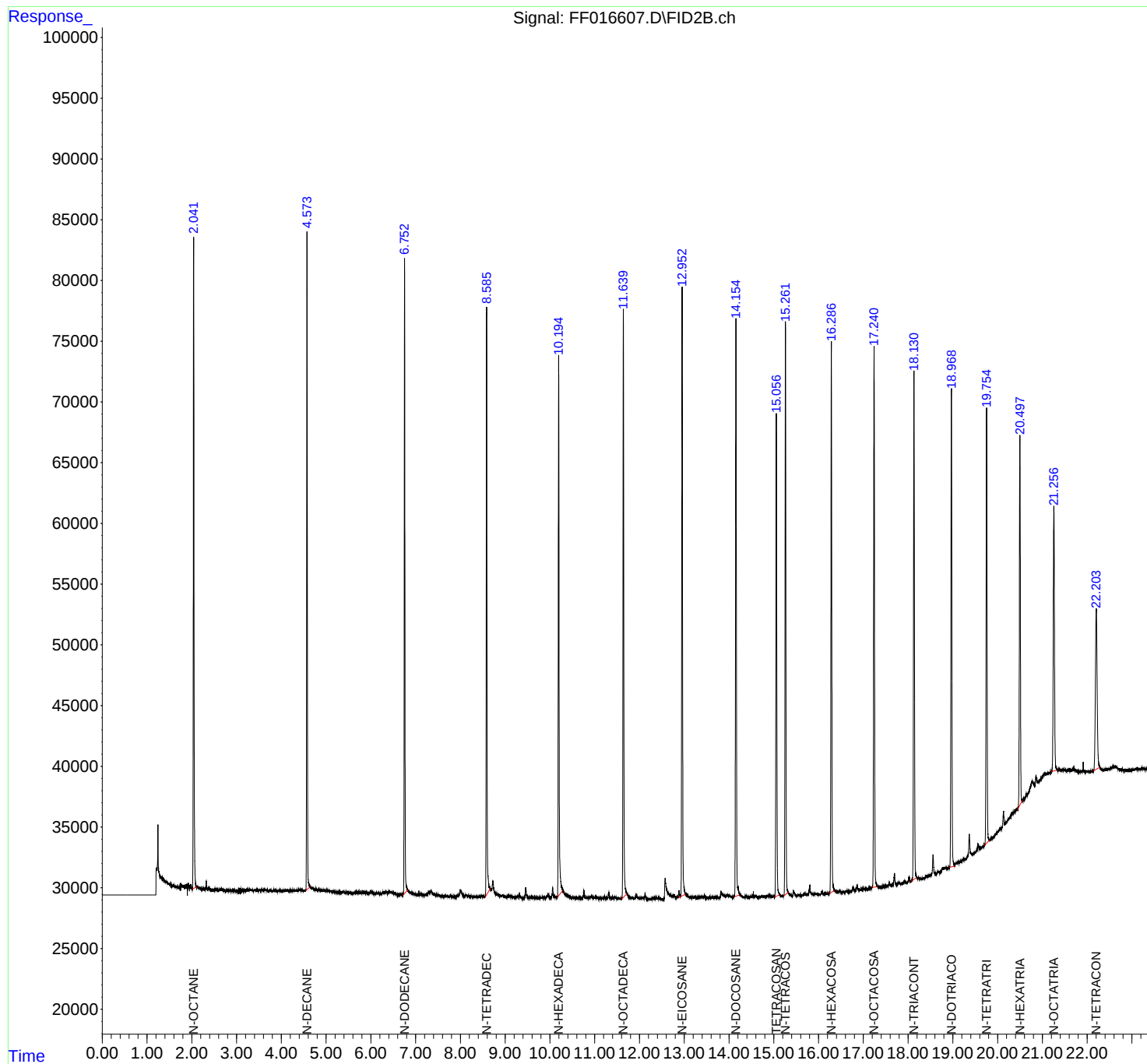
(m)=manual int.

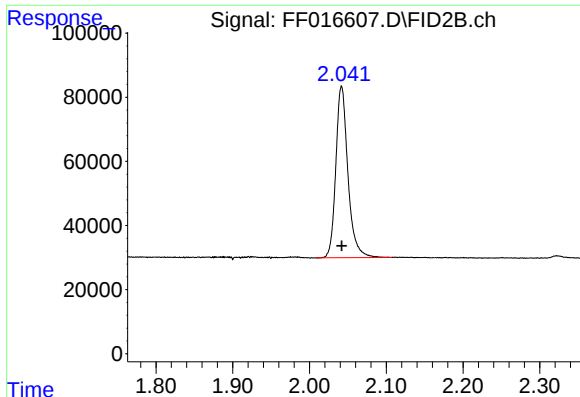
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF102925\
Data File : FF016607.D
Signal(s) : FID2B.ch
Acq On : 29 Oct 2025 12:37
Operator : YP\AJ
Sample : 5 TRPH STD
Misc :
ALS Vial : 75 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
5 TRPH STD

Integration File: autoint1.e
Quant Time: Oct 29 12:47:36 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
Quant Title :
QLast Update : Wed Oct 29 12:47:26 2025
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um

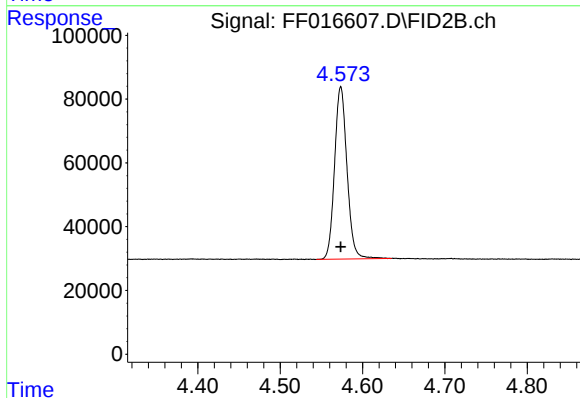




#1 N-OCTANE

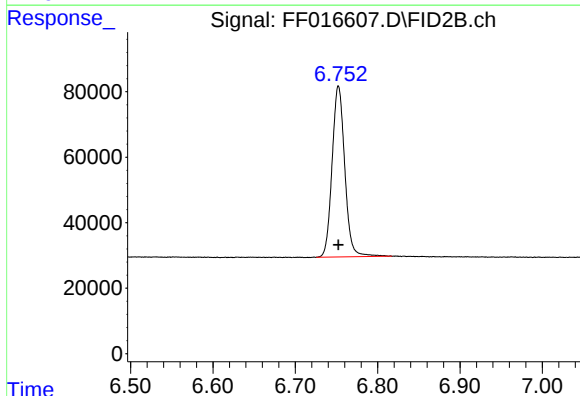
R.T.: 2.042 min
Delta R.T.: 0.000 min
Response: 585385
Conc: 5.27 ug/ml

Instrument :
FID_F
ClientSampleId :
5 TRPH STD



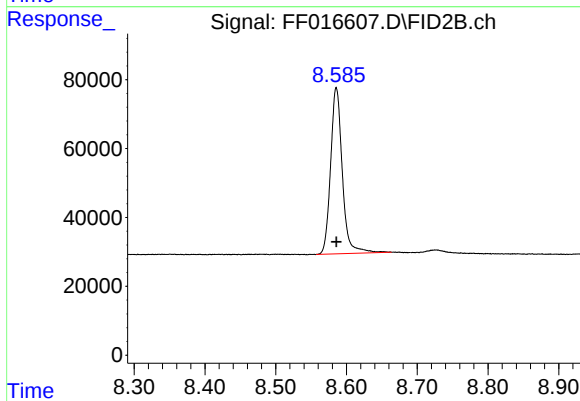
#2 N-DECANE

R.T.: 4.574 min
Delta R.T.: 0.000 min
Response: 567417
Conc: 5.13 ug/ml



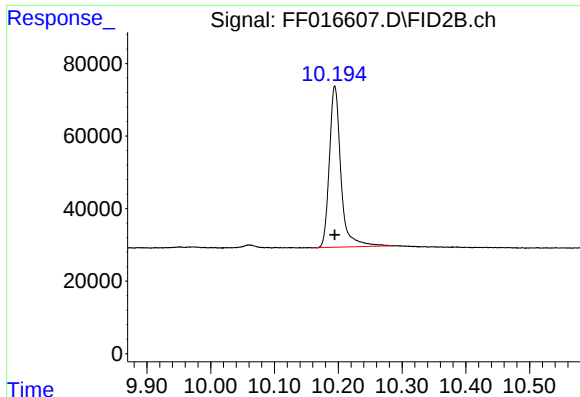
#3 N-DODECANE

R.T.: 6.753 min
Delta R.T.: 0.000 min
Response: 559098
Conc: 5.03 ug/ml



#4 N-TETRADECANE

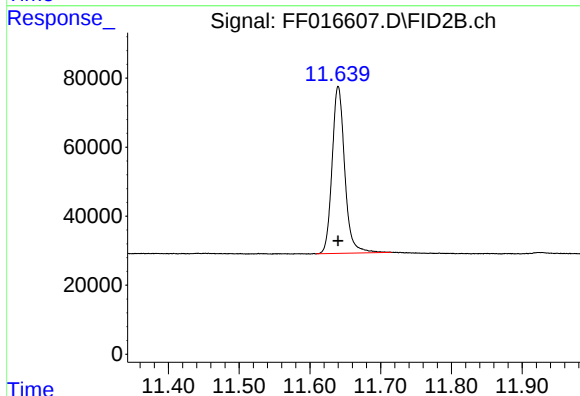
R.T.: 8.586 min
Delta R.T.: 0.000 min
Response: 554115
Conc: 4.96 ug/ml



#5 N-HEXADECANE

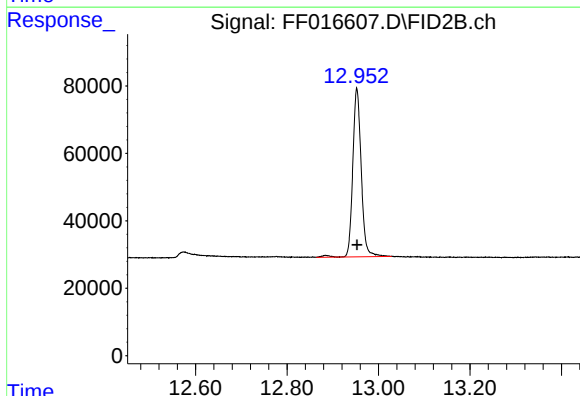
R.T.: 10.195 min
Delta R.T.: 0.000 min
Response: 558414
Conc: 4.97 ug/ml

Instrument :
FID_F
ClientSampleId :
5 TRPH STD



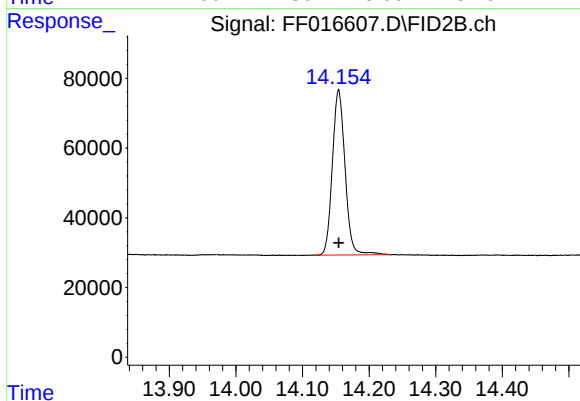
#6 N-OCTADECANE

R.T.: 11.640 min
Delta R.T.: 0.000 min
Response: 600673
Conc: 5.13 ug/ml



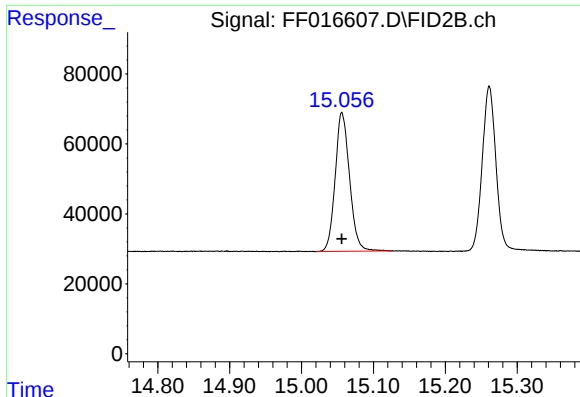
#7 N-EICOSANE

R.T.: 12.953 min
Delta R.T.: 0.000 min
Response: 643049
Conc: 5.27 ug/ml



#8 N-DOCOSANE

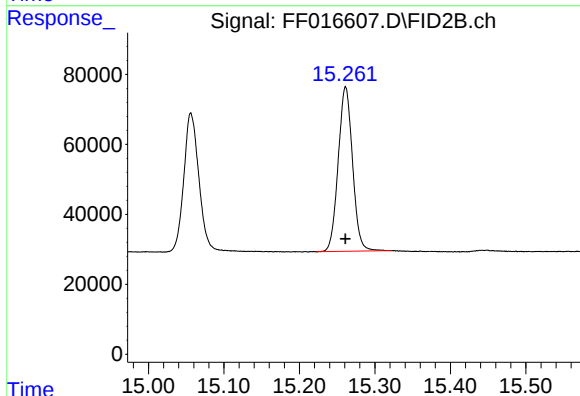
R.T.: 14.154 min
Delta R.T.: 0.000 min
Response: 628663
Conc: 5.27 ug/ml



#9 TETRACOSANE-d50 (SURROGATE)

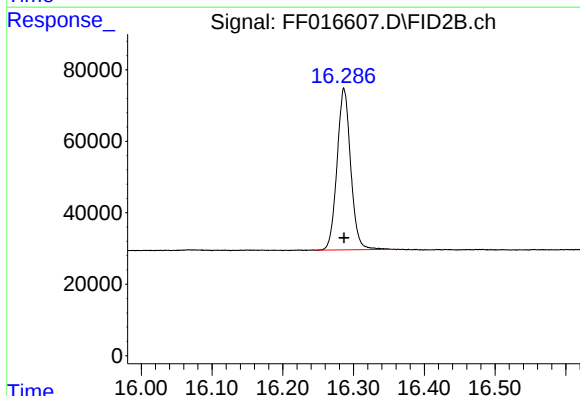
R.T.: 15.056 min
Delta R.T.: 0.000 min
Response: 550877
Conc: 5.27 ug/ml

Instrument :
FID_F
ClientSampleId :
5 TRPH STD



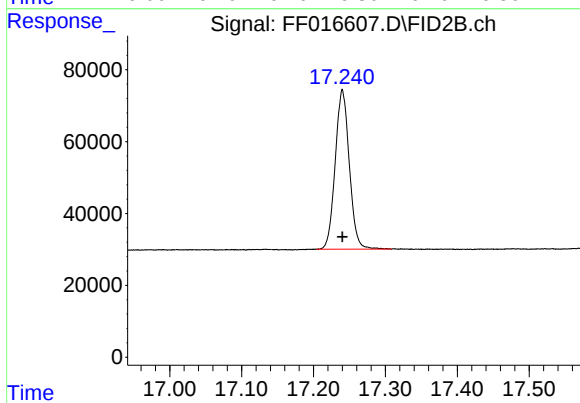
#10 N-TETRACOSANE

R.T.: 15.261 min
Delta R.T.: 0.000 min
Response: 621091
Conc: 5.24 ug/ml



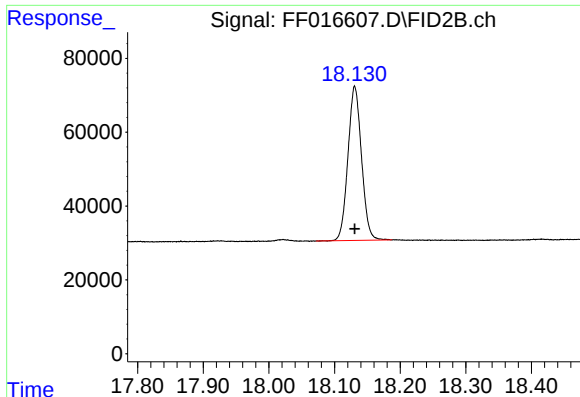
#11 N-HEXACOSANE

R.T.: 16.287 min
Delta R.T.: 0.000 min
Response: 605262
Conc: 5.27 ug/ml



#12 N-OCTACOSANE

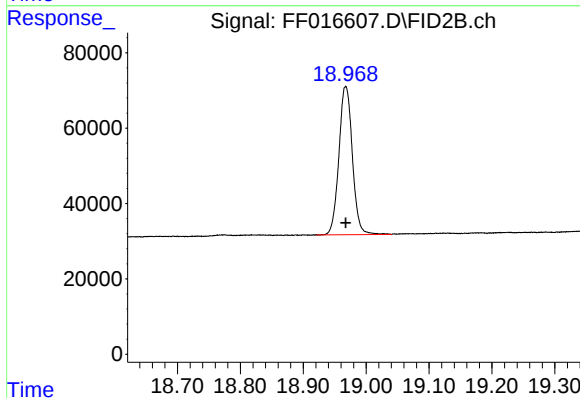
R.T.: 17.240 min
Delta R.T.: 0.000 min
Response: 605577
Conc: 5.31 ug/ml



#13 N-TRIACONTANE

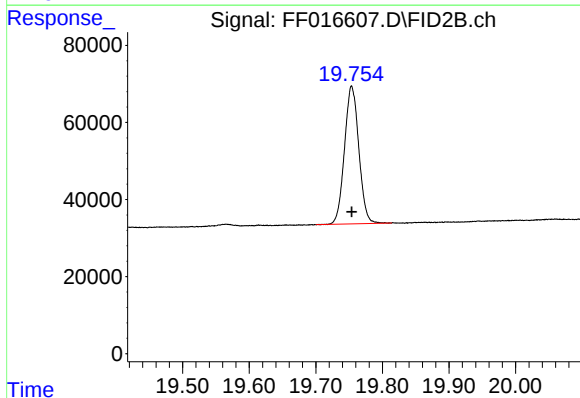
R.T.: 18.131 min
Delta R.T.: 0.000 min
Response: 599711
Conc: 5.34 ug/ml

Instrument :
FID_F
ClientSampleId :
5 TRPH STD



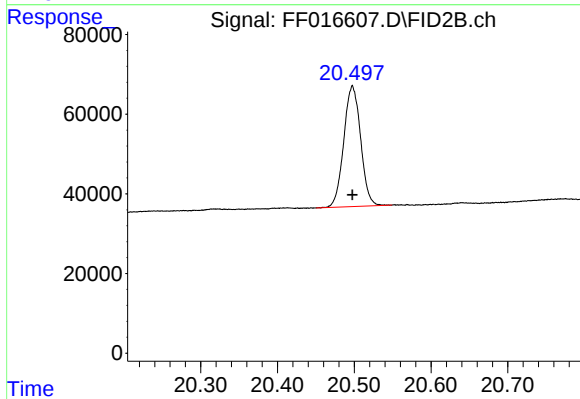
#14 N-DOTRIACONTANE

R.T.: 18.967 min
Delta R.T.: 0.000 min
Response: 585750
Conc: 5.46 ug/ml



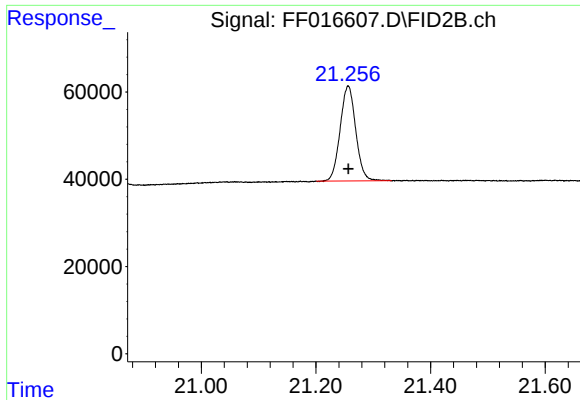
#15 N-TETRATRIACONTANE

R.T.: 19.754 min
Delta R.T.: 0.000 min
Response: 534045
Conc: 5.43 ug/ml



#16 N-HEXATRIACONTANE

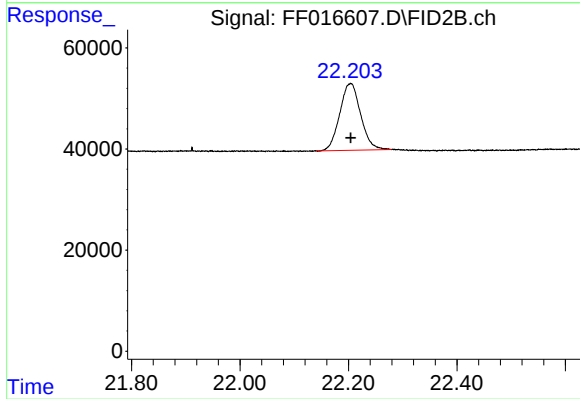
R.T.: 20.498 min
Delta R.T.: 0.000 min
Response: 461922
Conc: 5.40 ug/ml



#17 N-OCTATRIACONTANE

R.T.: 21.256 min
Delta R.T.: 0.000 min
Response: 410442
Conc: 5.35 ug/ml

Instrument :
FID_F
ClientSampleId :
5 TRPH STD



#18 N-TETRACONTANE

R.T.: 22.204 min
Delta R.T.: 0.000 min
Response: 352301
Conc: 5.16 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF102925\
Data File : FF016607.D
Signal(s) : FID2B.ch
Acq On : 29 Oct 2025 12:37
Sample : 5 TRPH STD
Misc :
ALS Vial : 75 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	2.042	2.009	2.107	BB	53514	585385	91.03%	5.840%
2	4.574	4.544	4.635	BB	54103	567417	88.24%	5.661%
3	6.753	6.725	6.817	BB	52306	559098	86.94%	5.578%
4	8.586	8.557	8.664	BB	48304	554115	86.17%	5.528%
5	10.195	10.165	10.284	BB	44343	558414	86.84%	5.571%
6	11.640	11.609	11.715	BB	48442	600673	93.41%	5.992%
7	12.953	12.864	13.029	BB	49961	643049	100.00%	6.415%
8	14.154	14.120	14.234	BB	47434	628663	97.76%	6.272%
9	15.056	15.020	15.125	BB	39714	550877	85.67%	5.496%
10	15.261	15.222	15.322	BB	47078	621091	96.59%	6.196%
11	16.287	16.247	16.354	BB	44985	605262	94.12%	6.038%
12	17.240	17.204	17.309	BB	44397	605577	94.17%	6.041%
13	18.131	18.072	18.187	BB	41812	599711	93.26%	5.983%
14	18.967	18.920	19.040	BB	39272	585750	91.09%	5.844%
15	19.754	19.700	19.814	BB	35787	534045	83.05%	5.328%
16	20.498	20.450	20.549	BB	30327	461922	71.83%	4.608%
17	21.256	21.200	21.332	BB	21777	410442	63.83%	4.095%
18	22.204	22.140	22.280	BBA	13220	352301	54.79%	3.515%
Sum of corrected areas:							10023794	

FF102925.M Thu Oct 30 14:04:00 2025

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF102925\
 Data File : FF016608.D
 Signal(s) : FID2B.ch
 Acq On : 29 Oct 2025 13:06
 Operator : YP\AJ
 Sample : FF102925ICV
 Misc :
 ALS Vial : 76 Sample Multiplier: 1

Instrument :
 FID_F
 ClientSampleId :
 FF102925ICV

Integration File: autoint1.e
 Quant Time: Oct 29 13:24:39 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
 Quant Title :
 QLast Update : Wed Oct 29 12:48:52 2025
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1uL
 Signal Phase : Rxi-1ms
 Signal Info : 20mx0.18mmx0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.060	4952815	47.407 ug/ml
Target Compounds			
1) N-OCTANE	2.040	5287479	47.637 ug/ml
2) N-DECANE	4.575	5365136	48.489 ug/ml
3) N-DODECANE	6.754	5414291	48.739 ug/ml
4) N-TETRADECANE	8.587	5485210	49.101 ug/ml
5) N-HEXADECANE	10.196	5499692	48.948 ug/ml
6) N-OCTADECANE	11.642	5646170	48.246 ug/ml
7) N-EICOSANE	12.957	5803629	47.529 ug/ml
8) N-DOCOSANE	14.159	5653581	47.427 ug/ml
10) N-TETRACOSANE	15.265	5626796	47.488 ug/ml
11) N-HEXACOSANE	16.289	5450407	47.445 ug/ml
12) N-OCTACOSANE	17.244	5372820	47.148 ug/ml
13) N-TRIACONTANE	18.133	5269614	46.900 ug/ml
14) N-DOTRIACONTANE	18.970	4967306	46.338 ug/ml
15) N-TETRATRIACONTANE	19.756	4570706	46.516 ug/ml
16) N-HEXATRIACONTANE	20.499	4012368	46.924 ug/ml
17) N-OCTATRIACONTANE	21.257	3607849	47.006 ug/ml
18) N-TETRACONTANE	22.204	3292580	48.245 ug/ml

(f)=RT Delta > 1/2 Window

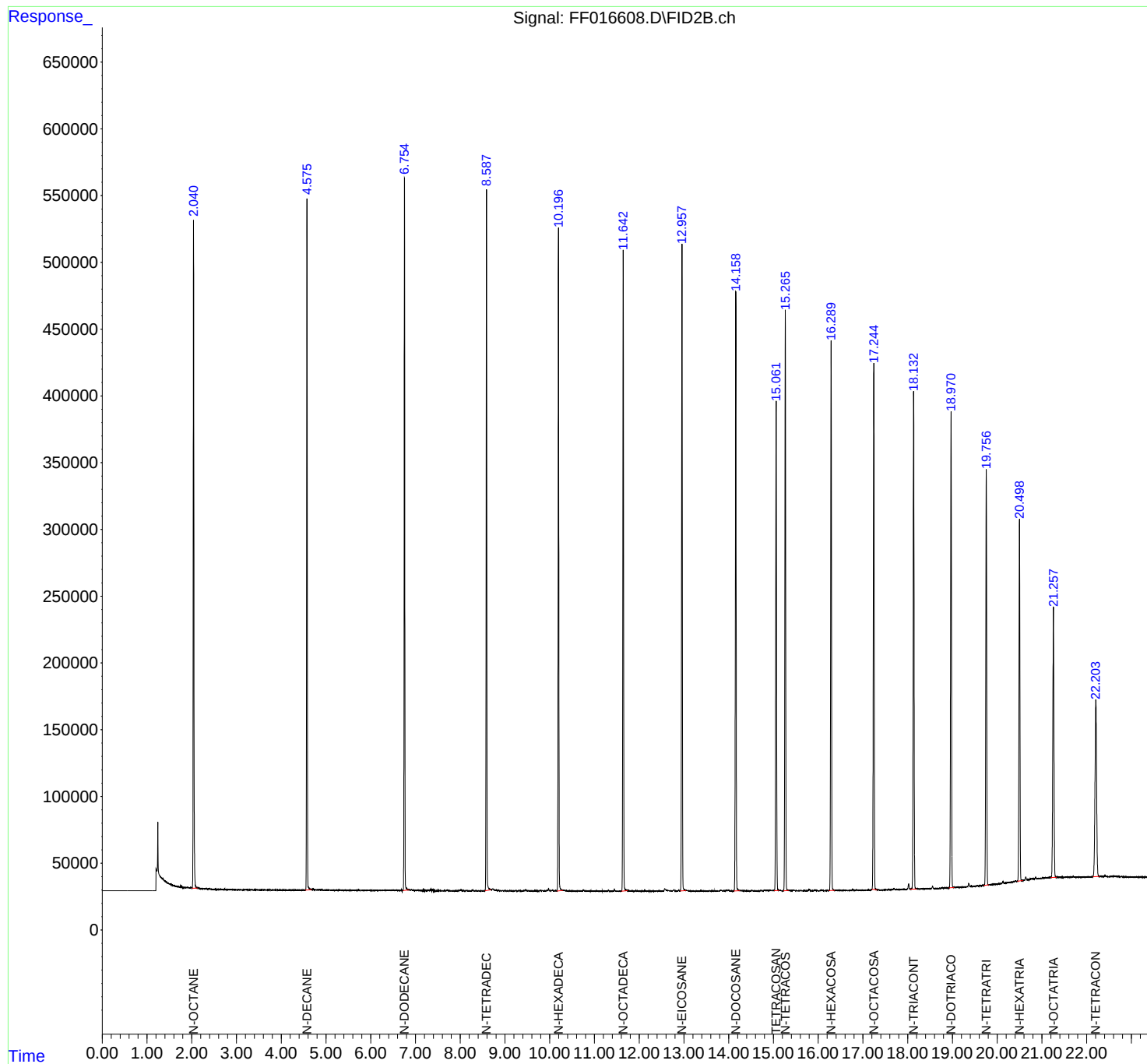
(m)=manual int.

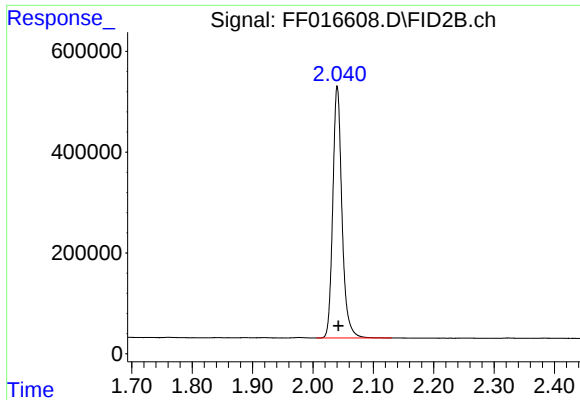
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF102925\
Data File : FF016608.D
Signal(s) : FID2B.ch
Acq On : 29 Oct 2025 13:06
Operator : YP\AJ
Sample : FF102925ICV
Misc :
ALS Vial : 76 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
FF102925ICV

Integration File: autoint1.e
Quant Time: Oct 29 13:24:39 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
Quant Title :
QLast Update : Wed Oct 29 12:48:52 2025
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um

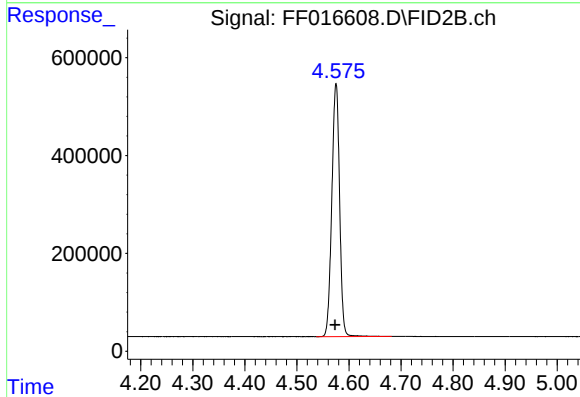




#1 N-OCTANE

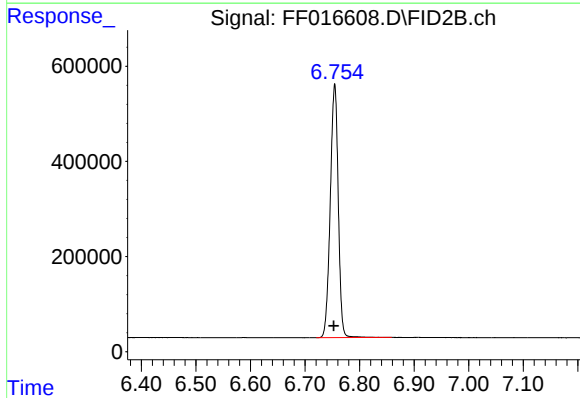
R.T.: 2.040 min
Delta R.T.: -0.002 min
Response: 5287479
Conc: 47.64 ug/ml

Instrument :
FID_F
ClientSampleId :
FF102925ICV



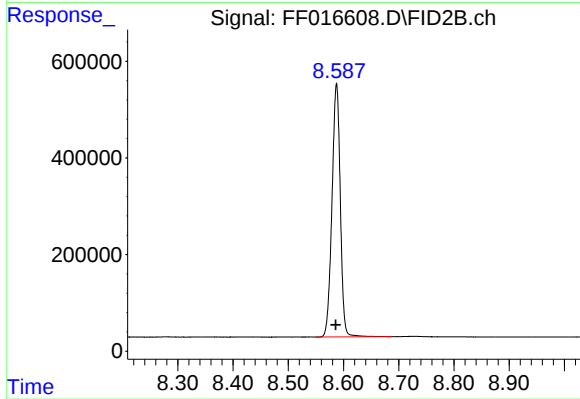
#2 N-DECANE

R.T.: 4.575 min
Delta R.T.: 0.002 min
Response: 5365136
Conc: 48.49 ug/ml



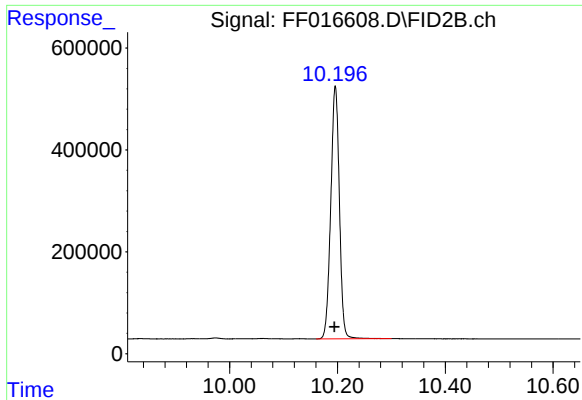
#3 N-DODECANE

R.T.: 6.754 min
Delta R.T.: 0.002 min
Response: 5414291
Conc: 48.74 ug/ml



#4 N-TETRADECANE

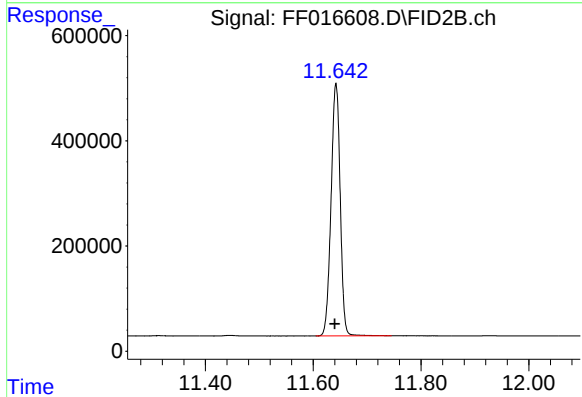
R.T.: 8.587 min
Delta R.T.: 0.002 min
Response: 5485210
Conc: 49.10 ug/ml



#5 N-HEXADECANE

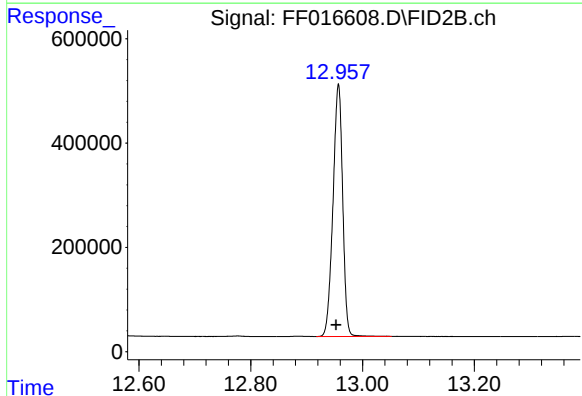
R.T.: 10.196 min
Delta R.T.: 0.002 min
Response: 5499692
Conc: 48.95 ug/ml

Instrument :
FID_F
ClientSampleId :
FF102925ICV



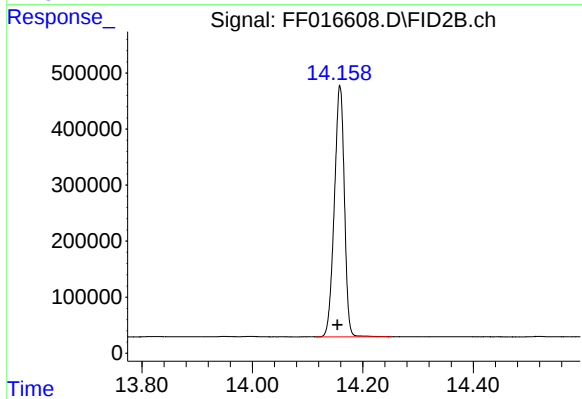
#6 N-OCTADECANE

R.T.: 11.642 min
Delta R.T.: 0.002 min
Response: 5646170
Conc: 48.25 ug/ml



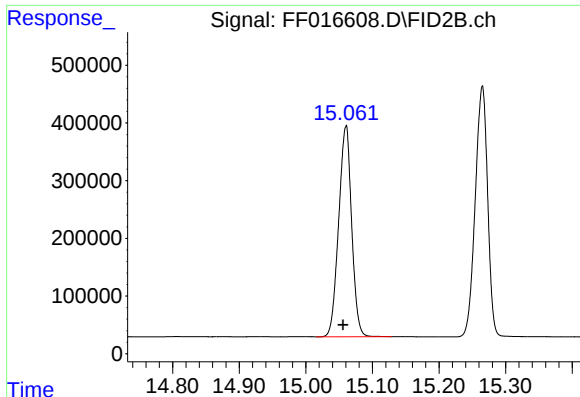
#7 N-EICOSANE

R.T.: 12.957 min
Delta R.T.: 0.004 min
Response: 5803629
Conc: 47.53 ug/ml



#8 N-DOCOSANE

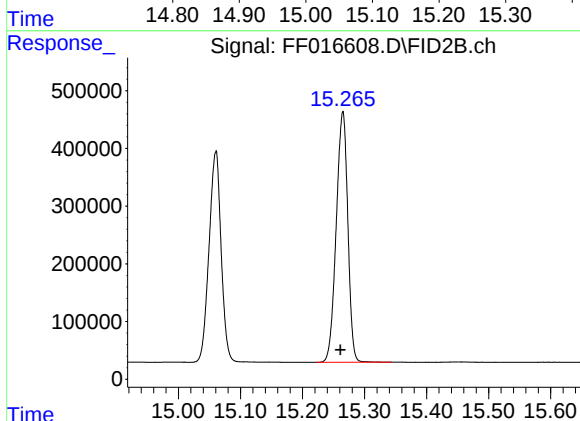
R.T.: 14.159 min
Delta R.T.: 0.004 min
Response: 5653581
Conc: 47.43 ug/ml



#9 TETRACOSANE-d50 (SURROGATE)

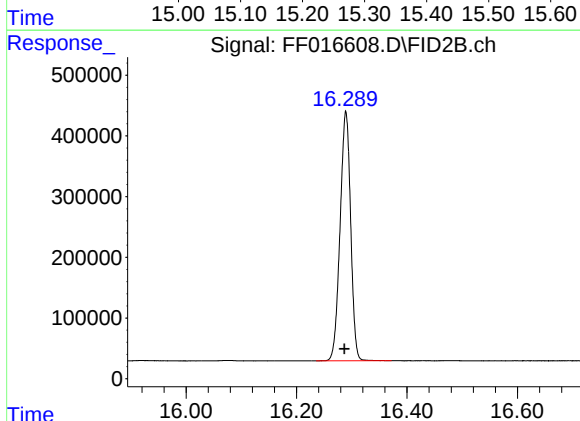
R.T.: 15.060 min
Delta R.T.: 0.004 min
Response: 4952815
Conc: 47.41 ug/ml

Instrument :
FID_F
ClientSampleId :
FF102925ICV



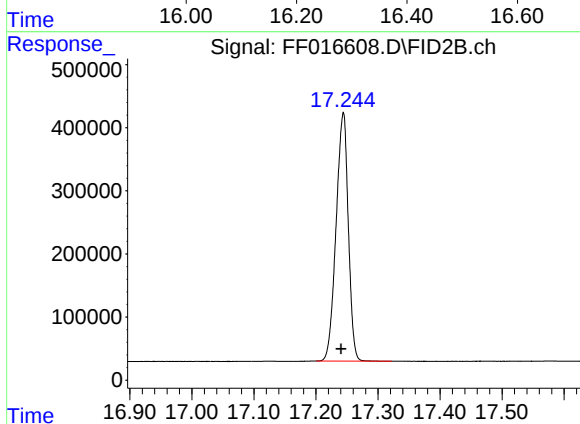
#10 N-TETRACOSANE

R.T.: 15.265 min
Delta R.T.: 0.004 min
Response: 5626796
Conc: 47.49 ug/ml



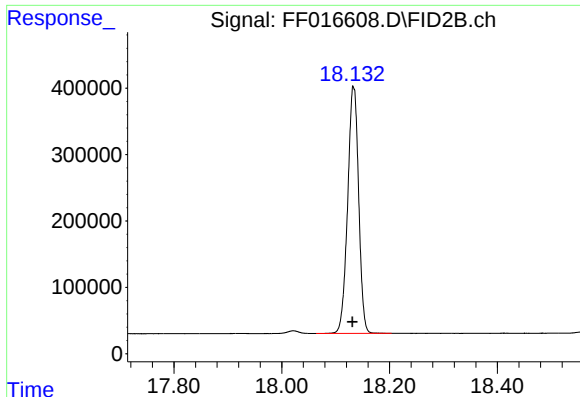
#11 N-HEXACOSANE

R.T.: 16.289 min
Delta R.T.: 0.003 min
Response: 5450407
Conc: 47.44 ug/ml



#12 N-OCTACOSANE

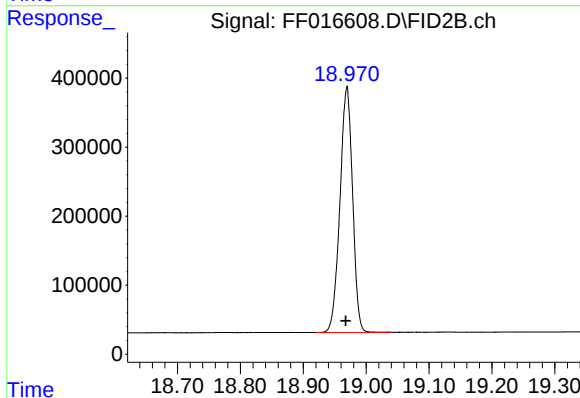
R.T.: 17.244 min
Delta R.T.: 0.004 min
Response: 5372820
Conc: 47.15 ug/ml



#13 N-TRIACONTANE

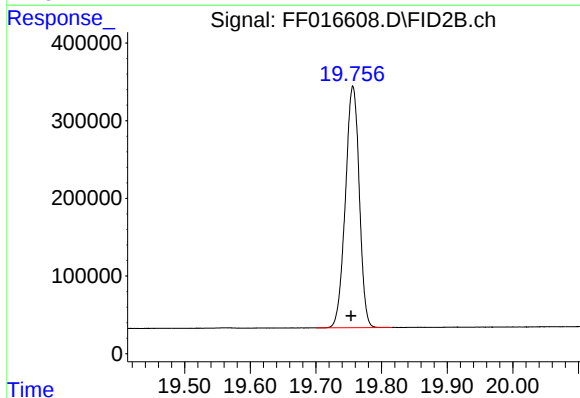
R.T.: 18.133 min
Delta R.T.: 0.002 min
Response: 5269614
Conc: 46.90 ug/ml

Instrument :
FID_F
ClientSampleId :
FF102925ICV



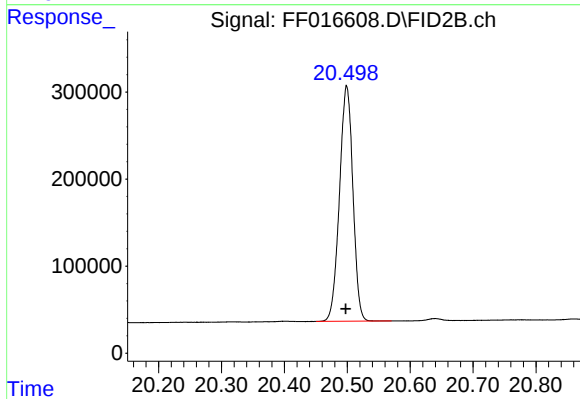
#14 N-DOTRIACONTANE

R.T.: 18.970 min
Delta R.T.: 0.002 min
Response: 4967306
Conc: 46.34 ug/ml



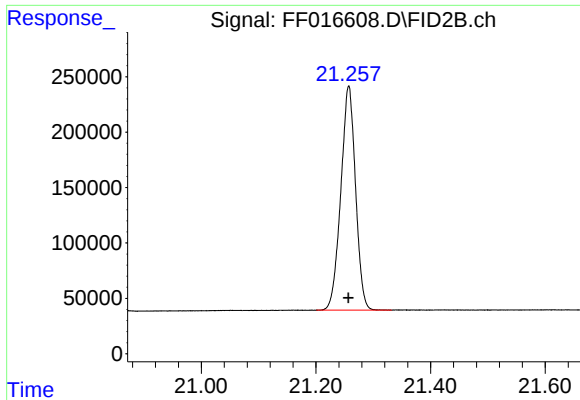
#15 N-TETRATRIACONTANE

R.T.: 19.756 min
Delta R.T.: 0.003 min
Response: 4570706
Conc: 46.52 ug/ml



#16 N-HEXATRIACONTANE

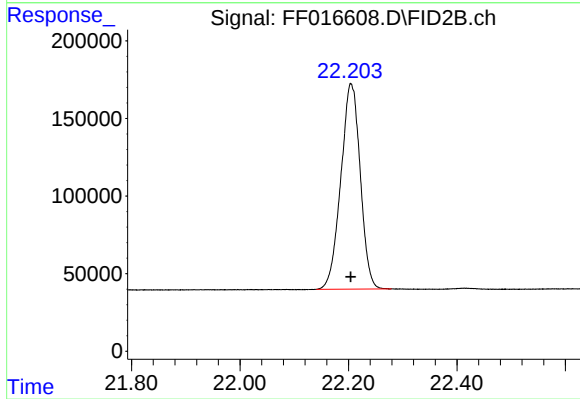
R.T.: 20.499 min
Delta R.T.: 0.002 min
Response: 4012368
Conc: 46.92 ug/ml



#17 N-OCTATRIACONTANE

R.T.: 21.257 min
Delta R.T.: 0.000 min
Response: 3607849
Conc: 47.01 ug/ml

Instrument :
FID_F
ClientSampleId :
FF102925ICV



#18 N-TETRACONTANE

R.T.: 22.204 min
Delta R.T.: 0.000 min
Response: 3292580
Conc: 48.24 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF102925\
Data File : FF016608.D
Signal(s) : FID2B.ch
Acq On : 29 Oct 2025 13:06
Sample : FF102925ICV
Misc :
ALS Vial : 76 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	2.040	2.005	2.130	BB	499409	5287479	91.11%	5.793%
2	4.575	4.537	4.682	BB	517837	5365136	92.44%	5.878%
3	6.754	6.720	6.859	BB	531096	5414291	93.29%	5.932%
4	8.587	8.550	8.687	BB	524173	5485210	94.51%	6.009%
5	10.196	10.160	10.300	BB	496852	5499692	94.76%	6.025%
6	11.642	11.605	11.745	BB	479057	5646170	97.29%	6.186%
7	12.957	12.917	13.052	BB	484195	5803629	100.00%	6.358%
8	14.159	14.115	14.252	BB	447509	5653581	97.41%	6.194%
9	15.060	15.015	15.129	BV	365458	4952815	85.34%	5.426%
10	15.265	15.222	15.344	BB	435332	5626796	96.95%	6.164%
11	16.289	16.235	16.372	BB	411425	5450407	93.91%	5.971%
12	17.244	17.200	17.322	BB	393407	5372820	92.58%	5.886%
13	18.133	18.064	18.204	BB	369308	5269614	90.80%	5.773%
14	18.970	18.920	19.040	BB	354615	4967306	85.59%	5.442%
15	19.756	19.700	19.815	BB	310910	4570706	78.76%	5.007%
16	20.499	20.450	20.570	BB	270850	4012368	69.14%	4.396%
17	21.257	21.200	21.332	BB	202393	3607849	62.17%	3.953%
18	22.204	22.140	22.280	BBA	132626	3292580	56.73%	3.607%
Sum of corrected areas:							91278449	

FF102925.M Thu Oct 30 14:04:18 2025

TPH GC CONTINUING CALIBRATION SUMMARY

50 PPM TRPH STD

Lab Name: Alliane Contract: AECO02
ProjectID: AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 6
Lab Code: ACE SDG No.: Q3434
DataFile: FF016632.D Analyst Name: YP\AJ Analyst Date: 10-30-2025

Conc. (PPM)	Area Count	RF	Average RF	%D
850	84691500	99637	106517	6.459

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF103025\
 Data File : FF016632.D
 Signal(s) : FID2B.ch
 Acq On : 30 Oct 2025 11:23
 Operator : YP\AJ
 Sample : 50 PPM TRPH STD
 Misc :
 ALS Vial : 53 Sample Multiplier: 1

Instrument :
 FID_F
 ClientSampleId :
 50 PPM TRPH STD

Integration File: autoint1.e
 Quant Time: Oct 31 02:19:49 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
 Quant Title :
 QLast Update : Wed Oct 29 12:48:52 2025
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1uL
 Signal Phase : Rxi-1ms
 Signal Info : 20mx0.18mmx0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.058	4863197	46.549 ug/ml
Target Compounds			
1) N-OCTANE	2.039	5130934	46.227 ug/ml
2) N-DECANE	4.574	5190161	46.907 ug/ml
3) N-DODECANE	6.753	5240413	47.174 ug/ml
4) N-TETRADECANE	8.586	5318144	47.605 ug/ml
5) N-HEXADECANE	10.195	5341028	47.536 ug/ml
6) N-OCTADECANE	11.640	5490567	46.917 ug/ml
7) N-EICOSANE	12.955	5671399	46.446 ug/ml
8) N-DOCOSANE	14.155	5533705	46.422 ug/ml
10) N-TETRACOSANE	15.262	5528170	46.655 ug/ml
11) N-HEXACOSANE	16.288	5364115	46.694 ug/ml
12) N-OCTACOSANE	17.241	5301095	46.519 ug/ml
13) N-TRIACONTANE	18.131	5221371	46.471 ug/ml
14) N-DOTRIACONTANE	18.968	4947461	46.153 ug/ml
15) N-TETRATRIACONTANE	19.755	4560348	46.410 ug/ml
16) N-HEXATRIACONTANE	20.498	4002518	46.808 ug/ml
17) N-OCTATRIACONTANE	21.255	3594228	46.829 ug/ml
18) N-TETRACONTANE	22.203	3255843	47.706 ug/ml

(f)=RT Delta > 1/2 Window

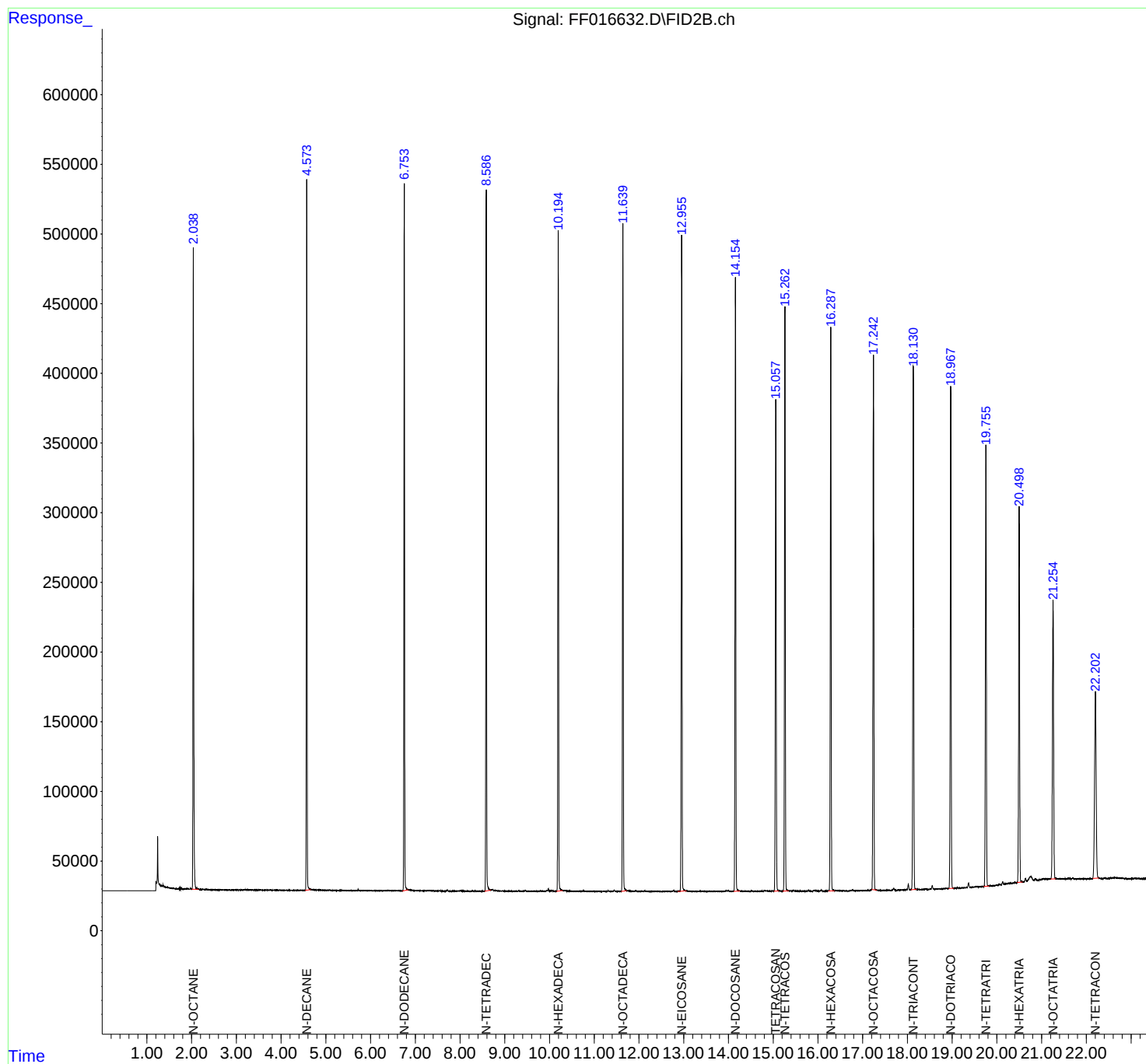
(m)=manual int.

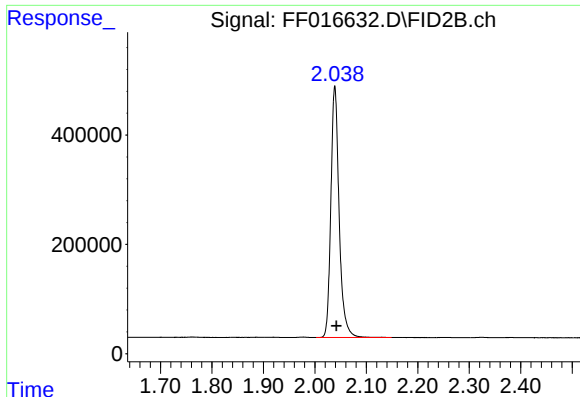
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF103025\
Data File : FF016632.D
Signal(s) : FID2B.ch
Acq On : 30 Oct 2025 11:23
Operator : YP\AJ
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 53 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
50 PPM TRPH STD

Integration File: autoint1.e
Quant Time: Oct 31 02:19:49 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
Quant Title :
QLast Update : Wed Oct 29 12:48:52 2025
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um

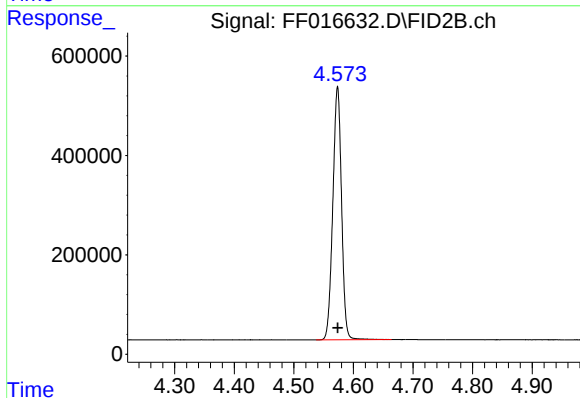




#1 N-OCTANE

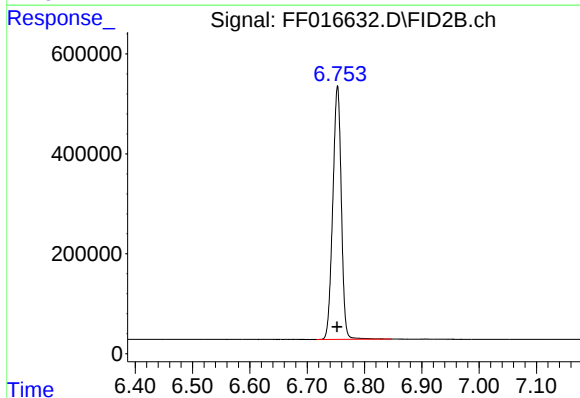
R.T.: 2.039 min
Delta R.T.: -0.003 min
Response: 5130934
Conc: 46.23 ug/ml

Instrument :
FID_F
ClientSampleId :
50 PPM TRPH STD



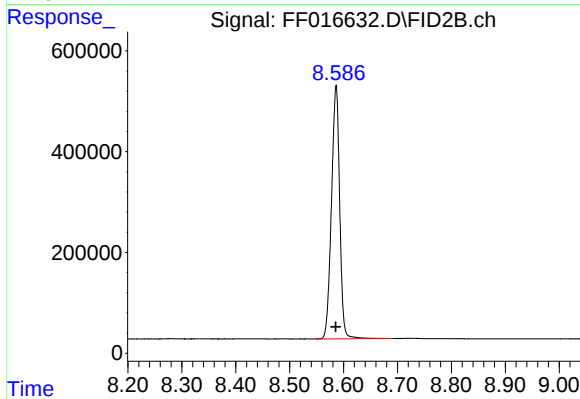
#2 N-DECANE

R.T.: 4.574 min
Delta R.T.: 0.000 min
Response: 5190161
Conc: 46.91 ug/ml



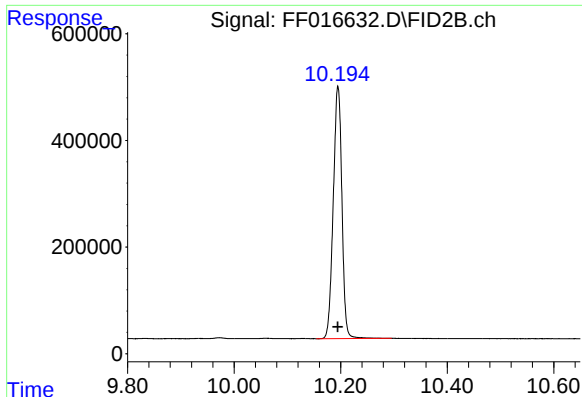
#3 N-DODECANE

R.T.: 6.753 min
Delta R.T.: 0.000 min
Response: 5240413
Conc: 47.17 ug/ml



#4 N-TETRADECANE

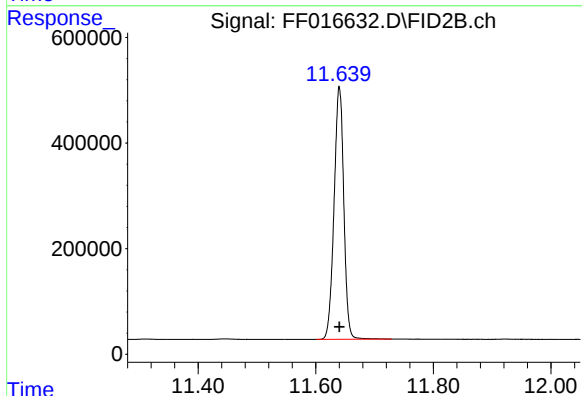
R.T.: 8.586 min
Delta R.T.: 0.000 min
Response: 5318144
Conc: 47.61 ug/ml



#5 N-HEXADECANE

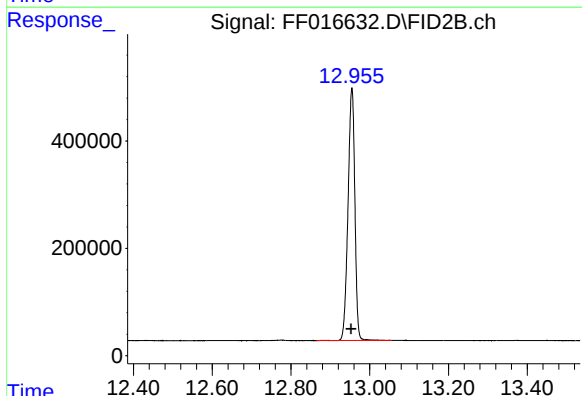
R.T.: 10.195 min
Delta R.T.: 0.000 min
Response: 5341028
Conc: 47.54 ug/ml

Instrument :
FID_F
ClientSampleId :
50 PPM TRPH STD



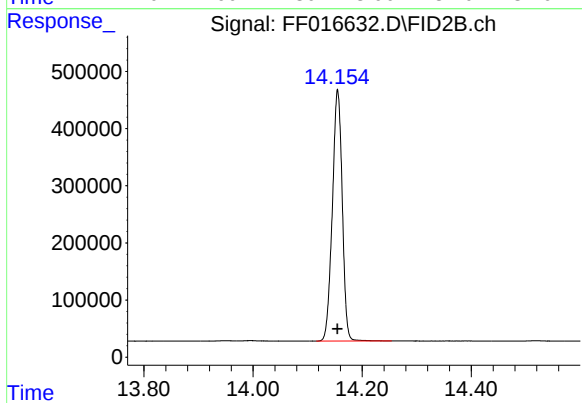
#6 N-OCTADECANE

R.T.: 11.640 min
Delta R.T.: 0.000 min
Response: 5490567
Conc: 46.92 ug/ml



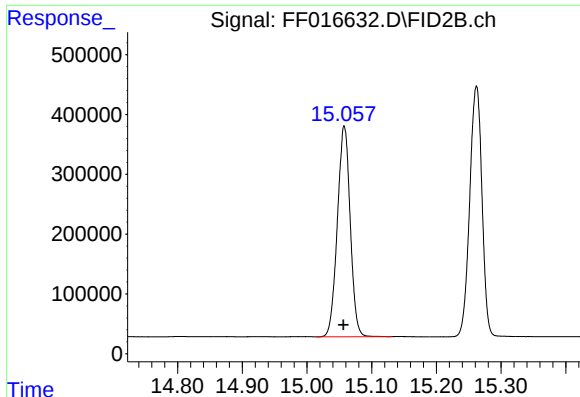
#7 N-EICOSANE

R.T.: 12.955 min
Delta R.T.: 0.002 min
Response: 5671399
Conc: 46.45 ug/ml



#8 N-DOCOSANE

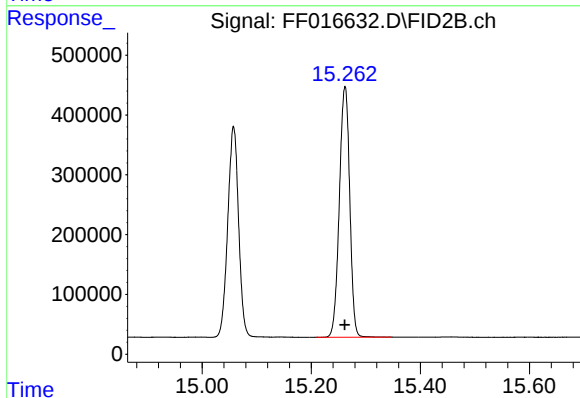
R.T.: 14.155 min
Delta R.T.: 0.000 min
Response: 5533705
Conc: 46.42 ug/ml



#9 TETRACOSANE-d50 (SURROGATE)

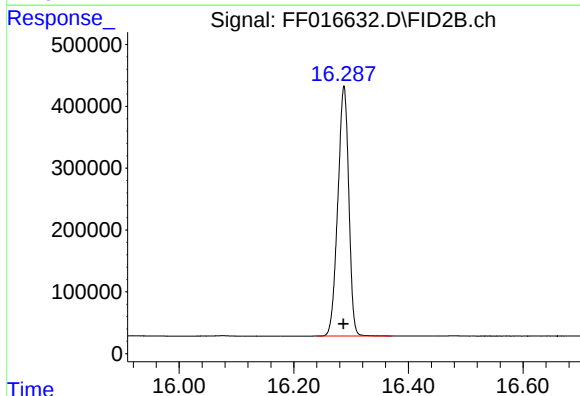
R.T.: 15.058 min
Delta R.T.: 0.002 min
Response: 4863197
Conc: 46.55 ug/ml

Instrument :
FID_F
ClientSampleId :
50 PPM TRPH STD



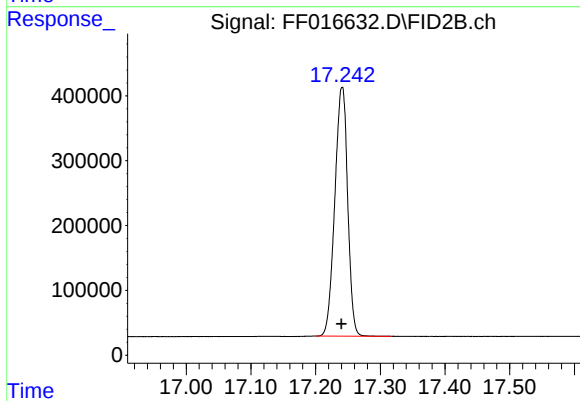
#10 N-TETRACOSANE

R.T.: 15.262 min
Delta R.T.: 0.000 min
Response: 5528170
Conc: 46.66 ug/ml



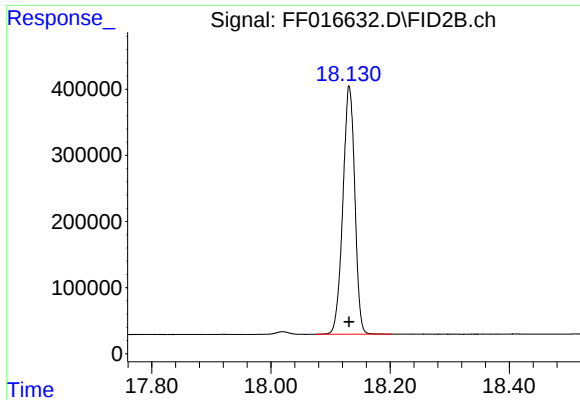
#11 N-HEXACOSANE

R.T.: 16.288 min
Delta R.T.: 0.001 min
Response: 5364115
Conc: 46.69 ug/ml



#12 N-OCTACOSANE

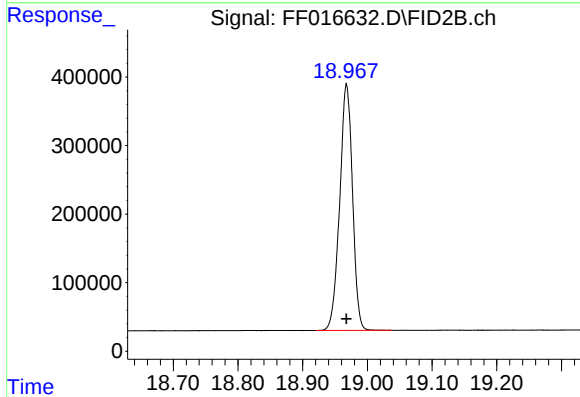
R.T.: 17.241 min
Delta R.T.: 0.000 min
Response: 5301095
Conc: 46.52 ug/ml



#13 N-TRIACONTANE

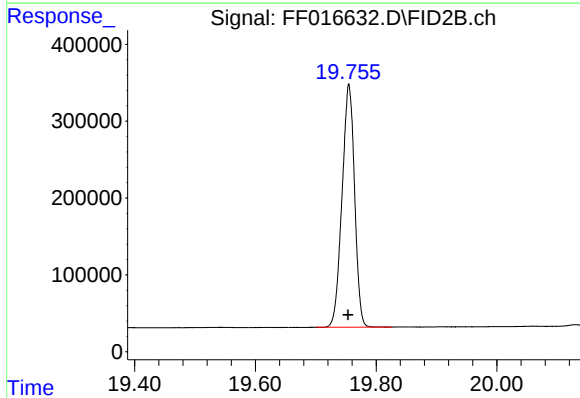
R.T.: 18.131 min
Delta R.T.: 0.000 min
Response: 5221371
Conc: 46.47 ug/ml

Instrument :
FID_F
ClientSampleId :
50 PPM TRPH STD



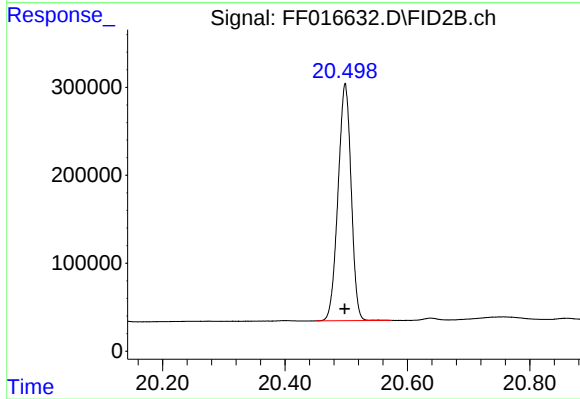
#14 N-DOTRIACONTANE

R.T.: 18.968 min
Delta R.T.: 0.000 min
Response: 4947461
Conc: 46.15 ug/ml



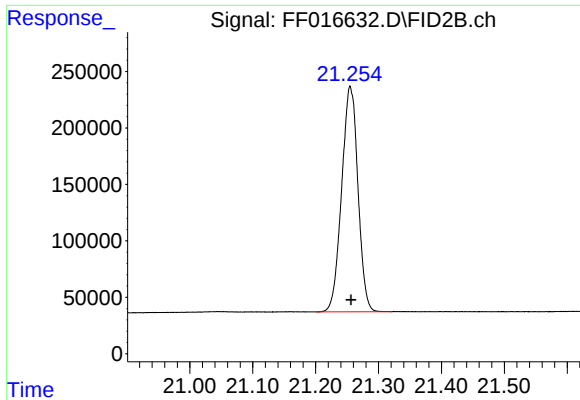
#15 N-TETRATRIACONTANE

R.T.: 19.755 min
Delta R.T.: 0.001 min
Response: 4560348
Conc: 46.41 ug/ml



#16 N-HEXATRIACONTANE

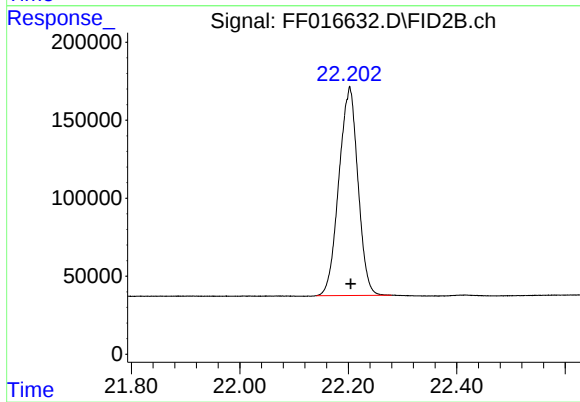
R.T.: 20.498 min
Delta R.T.: 0.000 min
Response: 4002518
Conc: 46.81 ug/ml



#17 N-OCTATRIACONTANE

R.T.: 21.255 min
Delta R.T.: -0.002 min
Response: 3594228
Conc: 46.83 ug/ml

Instrument :
FID_F
ClientSampleId :
50 PPM TRPH STD



#18 N-TETRACONTANE

R.T.: 22.203 min
Delta R.T.: -0.002 min
Response: 3255843
Conc: 47.71 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF103025\
Data File : FF016632.D
Signal(s) : FID2B.ch
Acq On : 30 Oct 2025 11:23
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 53 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	2.039	2.002	2.149	BB	460452	5130934	90.47%	5.729%
2	4.574	4.537	4.664	BB	510330	5190161	91.51%	5.796%
3	6.753	6.716	6.847	BB	506530	5240413	92.40%	5.852%
4	8.586	8.549	8.689	BB	502260	5318144	93.77%	5.938%
5	10.195	10.154	10.296	BB	472701	5341028	94.17%	5.964%
6	11.640	11.601	11.729	BB	476254	5490567	96.81%	6.131%
7	12.955	12.864	13.056	BB	470475	5671399	100.00%	6.333%
8	14.155	14.116	14.254	BB	438127	5533705	97.57%	6.179%
9	15.058	15.014	15.131	BB	352399	4863197	85.75%	5.430%
10	15.262	15.209	15.347	BB	419420	5528170	97.47%	6.173%
11	16.288	16.239	16.371	BB	404424	5364115	94.58%	5.990%
12	17.241	17.201	17.317	BB	383781	5301095	93.47%	5.919%
13	18.131	18.076	18.202	BB	376203	5221371	92.06%	5.830%
14	18.968	18.921	19.037	BB	359713	4947461	87.24%	5.525%
15	19.755	19.701	19.826	BB	316708	4560348	80.41%	5.092%
16	20.498	20.451	20.574	BB	270358	4002518	70.57%	4.469%
17	21.255	21.201	21.321	BB	199857	3594228	63.37%	4.013%
18	22.203	22.141	22.280	BBA	133831	3255843	57.41%	3.636%
Sum of corrected areas:							89554698	

FF102925.M Fri Oct 31 03:39:26 2025

TPH GC CONTINUING CALIBRATION SUMMARY

50 PPM TRPH STD

Lab Name: Alliane Contract: AECO02
ProjectID: AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 6
Lab Code: ACE SDG No.: Q3434
DataFile: FF016642.D Analyst Name: YP\AJ Analyst Date: 10-30-2025

Conc. (PPM)	Area Count	RF	Average RF	%D
850	89241081	104990	106517	1.434

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF103025\
 Data File : FF016642.D
 Signal(s) : FID2B.ch
 Acq On : 30 Oct 2025 16:19
 Operator : YP\AJ
 Sample : 50 PPM TRPH STD
 Misc :
 ALS Vial : 53 Sample Multiplier: 1

Instrument :
 FID_F
 ClientSampleId :
 50 PPM TRPH STD

Integration File: autoint1.e
 Quant Time: Oct 31 02:23:16 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
 Quant Title :
 QLast Update : Wed Oct 29 12:48:52 2025
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1uL
 Signal Phase : Rxi-1ms
 Signal Info : 20mx0.18mmx0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.064	4908262	46.980 ug/ml
Target Compounds			
1) N-OCTANE	2.042	5503468	49.583 ug/ml
2) N-DECANE	4.576	5661170	51.164 ug/ml
3) N-DODECANE	6.756	5701201	51.322 ug/ml
4) N-TETRADECANE	8.589	5690854	50.942 ug/ml
5) N-HEXADECANE	10.199	5653977	50.321 ug/ml
6) N-OCTADECANE	11.645	5767112	49.280 ug/ml
7) N-EICOSANE	12.958	5883664	48.185 ug/ml
8) N-DOCOSANE	14.162	5666373	47.535 ug/ml
10) N-TETRACOSANE	15.268	5594925	47.219 ug/ml
11) N-HEXACOSANE	16.293	5363442	46.688 ug/ml
12) N-OCTACOSANE	17.247	5258244	46.143 ug/ml
13) N-TRIACONTANE	18.140	5268771	46.893 ug/ml
14) N-DOTRIACONTANE	18.976	5244186	48.921 ug/ml
15) N-TETRATRIACONTANE	19.764	4997205	50.856 ug/ml
16) N-HEXATRIACONTANE	20.506	4452874	52.075 ug/ml
17) N-OCTATRIACONTANE	21.265	3930120	51.205 ug/ml
18) N-TETRACONTANE	22.216	3603495	52.800 ug/ml

(f)=RT Delta > 1/2 Window

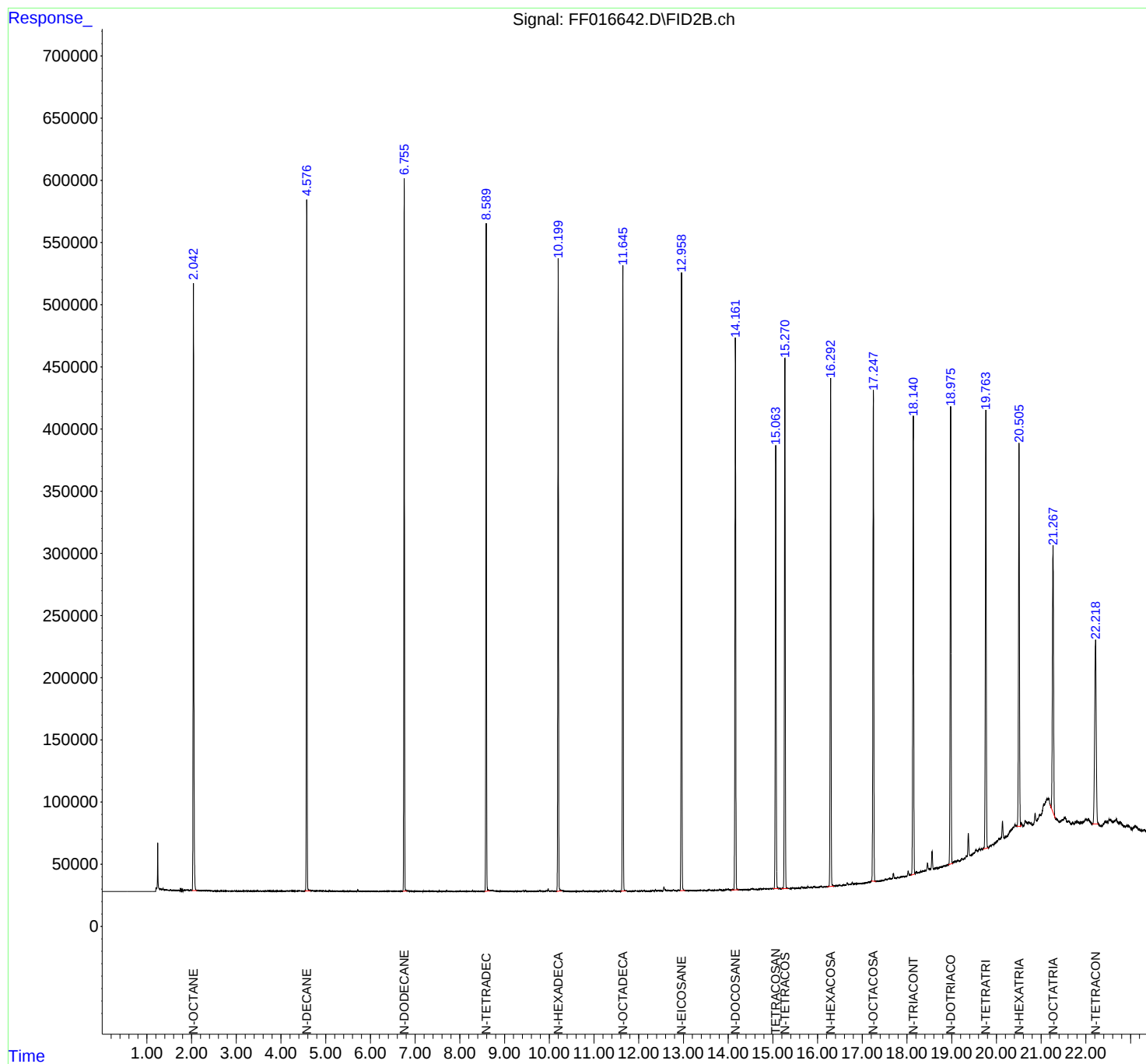
(m)=manual int.

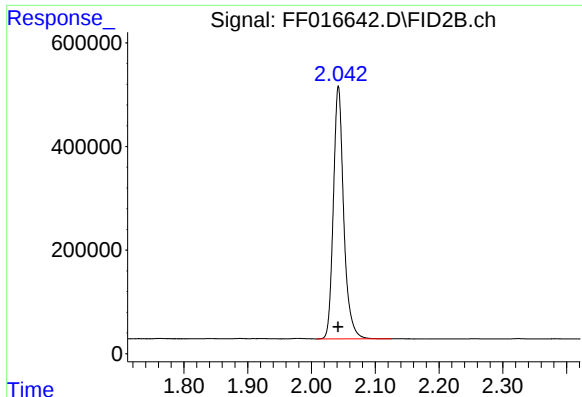
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF103025\
Data File : FF016642.D
Signal(s) : FID2B.ch
Acq On : 30 Oct 2025 16:19
Operator : YP\AJ
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 53 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
50 PPM TRPH STD

Integration File: autoint1.e
Quant Time: Oct 31 02:23:16 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
Quant Title :
QLast Update : Wed Oct 29 12:48:52 2025
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um

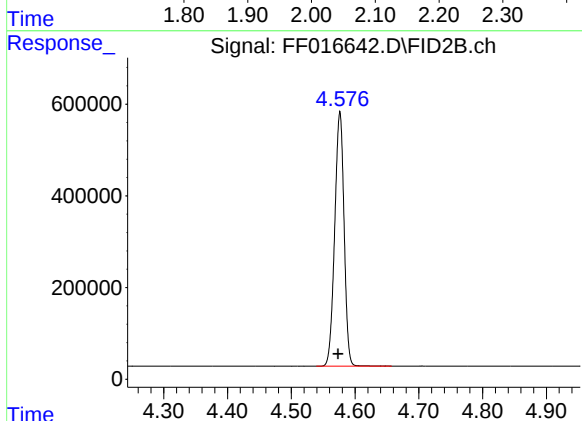




#1 N-OCTANE

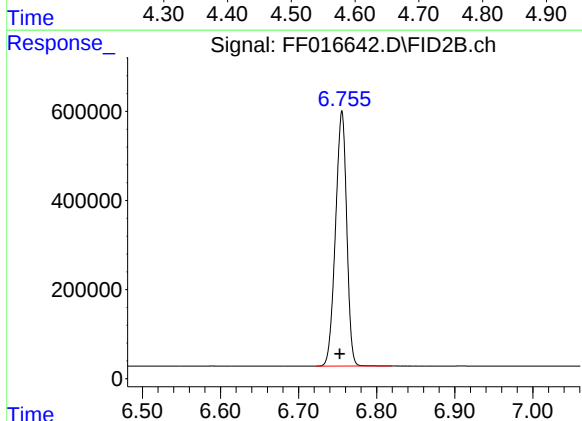
R.T.: 2.042 min
Delta R.T.: 0.000 min
Response: 5503468
Conc: 49.58 ug/ml

Instrument :
FID_F
ClientSampleId :
50 PPM TRPH STD



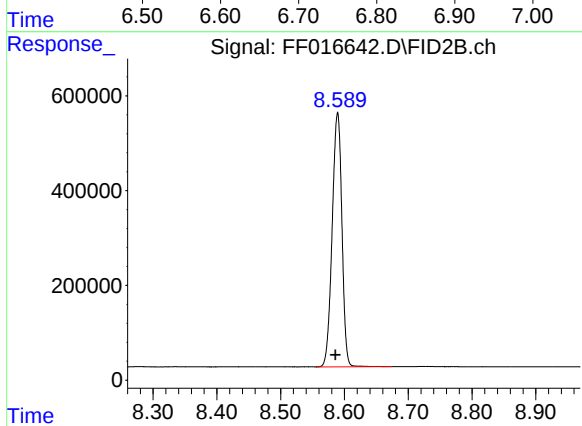
#2 N-DECANE

R.T.: 4.576 min
Delta R.T.: 0.003 min
Response: 5661170
Conc: 51.16 ug/ml



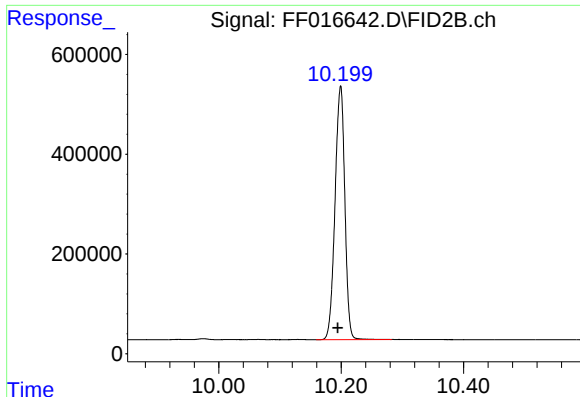
#3 N-DODECANE

R.T.: 6.756 min
Delta R.T.: 0.003 min
Response: 5701201
Conc: 51.32 ug/ml



#4 N-TETRADECANE

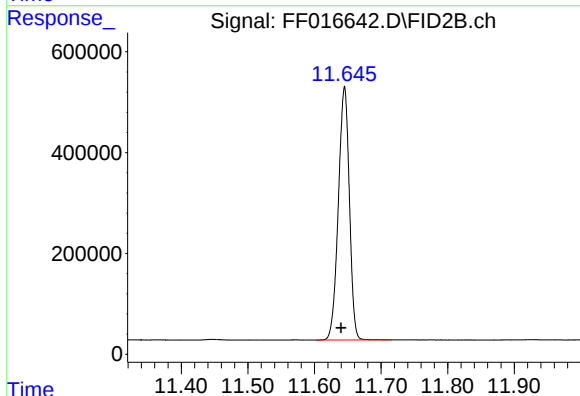
R.T.: 8.589 min
Delta R.T.: 0.004 min
Response: 5690854
Conc: 50.94 ug/ml



#5 N-HEXADECANE

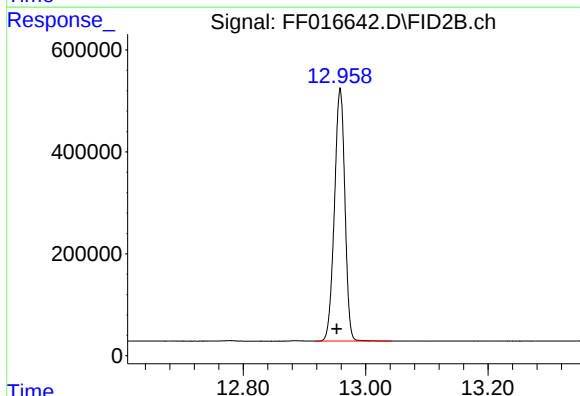
R.T.: 10.199 min
Delta R.T.: 0.005 min
Response: 5653977
Conc: 50.32 ug/ml

Instrument :
FID_F
ClientSampleId :
50 PPM TRPH STD



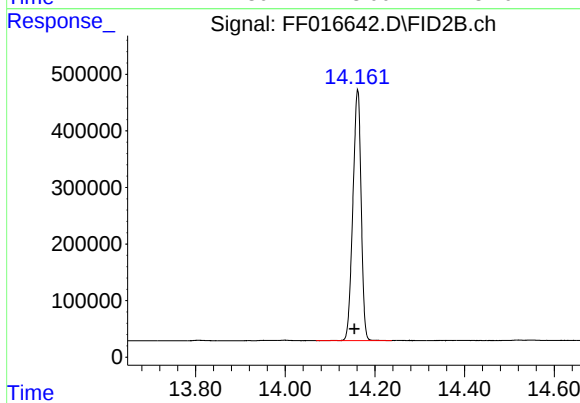
#6 N-OCTADECANE

R.T.: 11.645 min
Delta R.T.: 0.005 min
Response: 5767112
Conc: 49.28 ug/ml



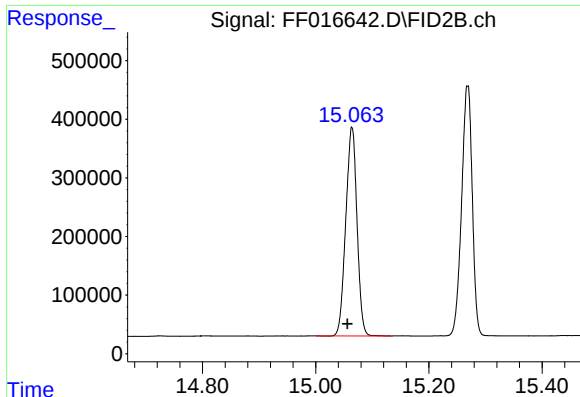
#7 N-EICOSANE

R.T.: 12.958 min
Delta R.T.: 0.006 min
Response: 5883664
Conc: 48.18 ug/ml



#8 N-DOCOSANE

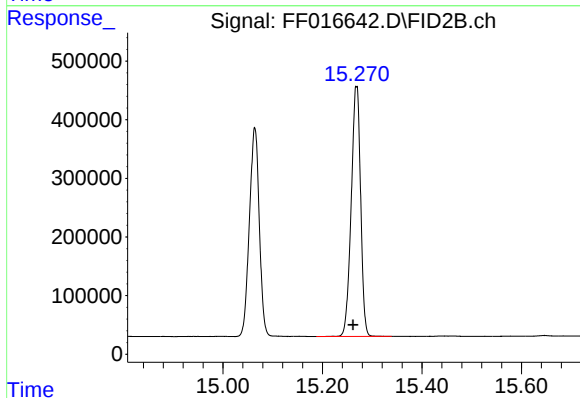
R.T.: 14.162 min
Delta R.T.: 0.007 min
Response: 5666373
Conc: 47.53 ug/ml



#9 TETRACOSANE-d50 (SURROGATE)

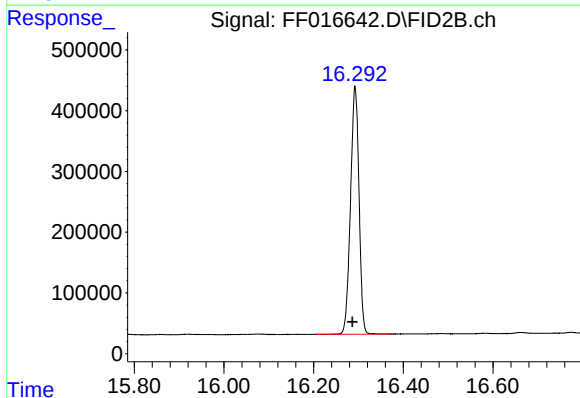
R.T.: 15.064 min
Delta R.T.: 0.008 min
Response: 4908262
Conc: 46.98 ug/ml

Instrument :
FID_F
ClientSampleId :
50 PPM TRPH STD



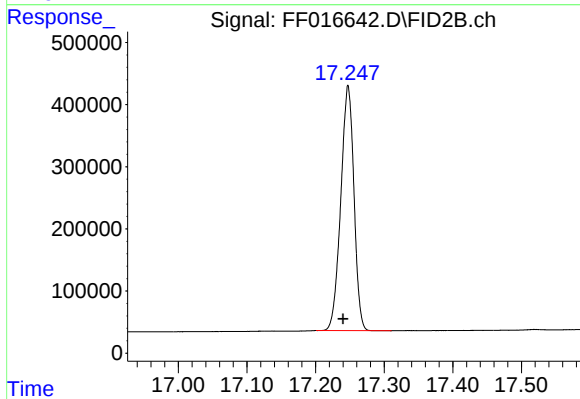
#10 N-TETRACOSANE

R.T.: 15.268 min
Delta R.T.: 0.007 min
Response: 5594925
Conc: 47.22 ug/ml



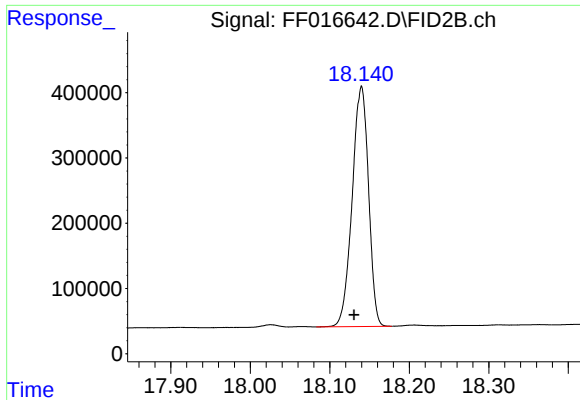
#11 N-HEXACOSANE

R.T.: 16.293 min
Delta R.T.: 0.006 min
Response: 5363442
Conc: 46.69 ug/ml



#12 N-OCTACOSANE

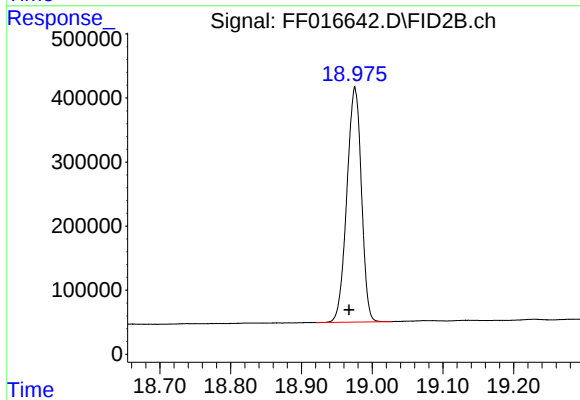
R.T.: 17.247 min
Delta R.T.: 0.007 min
Response: 5258244
Conc: 46.14 ug/ml



#13 N-TRIACONTANE

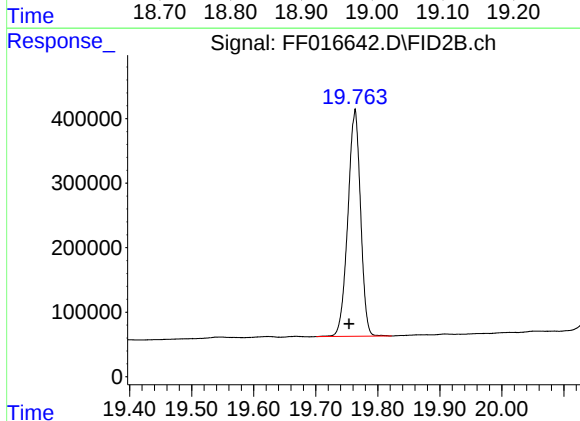
R.T.: 18.140 min
Delta R.T.: 0.009 min
Response: 5268771
Conc: 46.89 ug/ml

Instrument :
FID_F
ClientSampleId :
50 PPM TRPH STD



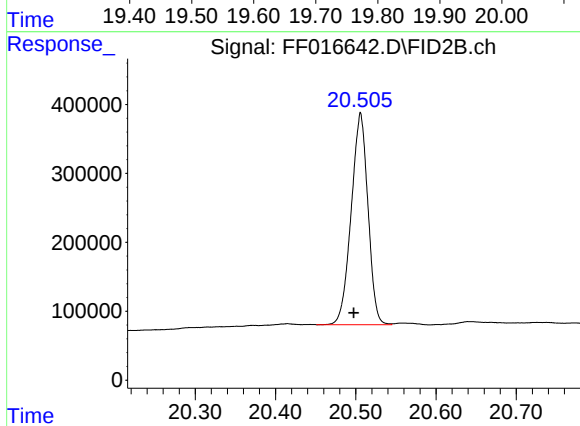
#14 N-DOTRIACONTANE

R.T.: 18.976 min
Delta R.T.: 0.008 min
Response: 5244186
Conc: 48.92 ug/ml



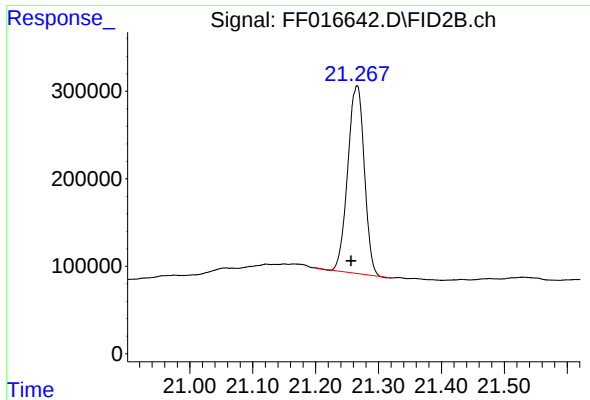
#15 N-TETRATRIACONTANE

R.T.: 19.764 min
Delta R.T.: 0.010 min
Response: 4997205
Conc: 50.86 ug/ml



#16 N-HEXATRIACONTANE

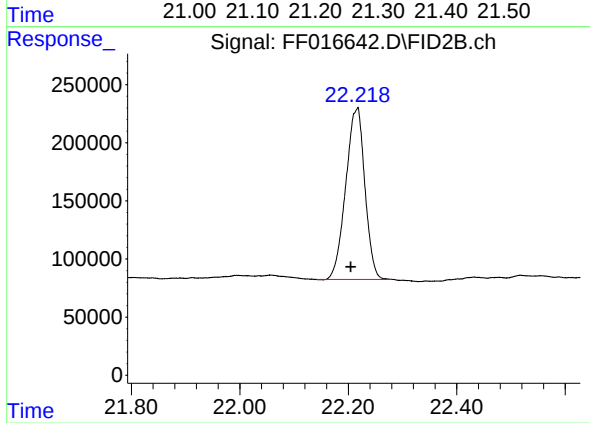
R.T.: 20.506 min
Delta R.T.: 0.008 min
Response: 4452874
Conc: 52.08 ug/ml



#17 N-OCTATRIACONTANE

R.T.: 21.265 min
Delta R.T.: 0.009 min
Response: 3930120
Conc: 51.20 ug/ml

Instrument :
FID_F
ClientSampleId :
50 PPM TRPH STD



#18 N-TETRACONTANE

R.T.: 22.216 min
Delta R.T.: 0.011 min
Response: 3603495
Conc: 52.80 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF103025\
Data File : FF016642.D
Signal(s) : FID2B.ch
Acq On : 30 Oct 2025 16:19
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 53 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	2.042	2.007	2.126	BB	487999	5503468	93.54%	5.845%
2	4.576	4.539	4.657	BB	553835	5661170	96.22%	6.013%
3	6.756	6.722	6.819	BB	573318	5701201	96.90%	6.055%
4	8.589	8.556	8.674	BB	535763	5690854	96.72%	6.044%
5	10.199	10.159	10.282	BB	508668	5653977	96.10%	6.005%
6	11.645	11.602	11.716	BB	503555	5767112	98.02%	6.125%
7	12.958	12.919	13.042	BB	496035	5883664	100.00%	6.249%
8	14.162	14.069	14.237	BB	443351	5666373	96.31%	6.018%
9	15.064	15.001	15.134	BB	356066	4908262	83.42%	5.213%
10	15.268	15.187	15.339	BB	426305	5594925	95.09%	5.943%
11	16.293	16.206	16.374	BB	408326	5363442	91.16%	5.697%
12	17.247	17.201	17.311	BB	394897	5258244	89.37%	5.585%
13	18.140	18.083	18.178	PV	368456	5268771	89.55%	5.596%
14	18.976	18.921	19.027	BV	366879	5244186	89.13%	5.570%
15	19.764	19.701	19.822	BV	352779	4997205	84.93%	5.308%
16	20.506	20.451	20.545	BV	308452	4452874	75.68%	4.730%
17	21.265	21.201	21.321	BV	214713	3930120	66.80%	4.174%
18	22.216	22.141	22.280	BBA	146443	3603495	61.25%	3.827%
Sum of corrected areas:							94149343	

FF102925.M Fri Oct 31 03:42:52 2025

Analytical Sequence

Client: AECOM

SDG No.: Q3434

Project: AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206

Instrument ID: FID_F

GC Column: RXI-1MS

ID: 0.18 (mm)

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES,
AND STANDARDS IS GIVEN BELOW:

MEAN SUROGATE RT FROM INITIAL CALIBRATION 15.059					
CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE AND TIME ANALYZED	DATAFILE	RT	#
PIBLK01	LBLK01	30 Oct 2025 10:24	FF016631.D	15.056	
50 PPM TRPH STD	50 PPM TRPH STD	30 Oct 2025 11:23	FF016632.D	15.058	
PB170324BL	PB170324BL	30 Oct 2025 12:22	FF016634.D	15.057	
PB170324BS	PB170324BS	30 Oct 2025 12:52	FF016635.D	15.056	
PR132-WC1-20251022	Q3434-01	30 Oct 2025 13:21	FF016636.D	15.006	
WASTEMS	Q3474-01MS	30 Oct 2025 14:21	FF016638.D	15.010	
WASTEMSD	Q3474-01MSD	30 Oct 2025 14:50	FF016639.D	15.012	
PIBLK02	LBLK02	30 Oct 2025 15:49	FF016641.D	15.062	
50 PPM TRPH STD	50 PPM TRPH STD	30 Oct 2025 16:19	FF016642.D	15.064	



QC SAMPLE DATA

Report of Analysis

Client:	AECOM		Date Collected:	
Project:	AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206		Date Received:	
Client Sample ID:	PB170324BL		SDG No.:	Q3434
Lab Sample ID:	PB170324BL		Matrix:	SOIL
Analytical Method:	8015D TPH		% Solid:	100
Sample Wt/Vol:	30.02 g	Final Vol:	1 mL	Test:
Prep Method:	SW3541	Prep Date	10/29/25	TPH GC

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS									
PHC	Petroleum Hydrocarbons	2830	U	1	384	2830	ug/kg	10/30/25 12:22	PB170324
SURROGATES									
16416-32-3	TETRACOSANE-d50	16.2			37 - 130	81%	SPK: 20		

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF103025\
Data File : FF016634.D
Signal(s) : FID2B.ch
Acq On : 30 Oct 2025 12:22
Operator : YP\AJ
Sample : PB170324BL
Misc :
ALS Vial : 31 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
PB170324BL

Integration File: autoint1.e
Quant Time: Oct 31 02:20:32 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
Quant Title :
QLast Update : Wed Oct 29 12:48:52 2025
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.057	1694064	16.215 ug/ml

Target Compounds

(f)=RT Delta > 1/2 Window

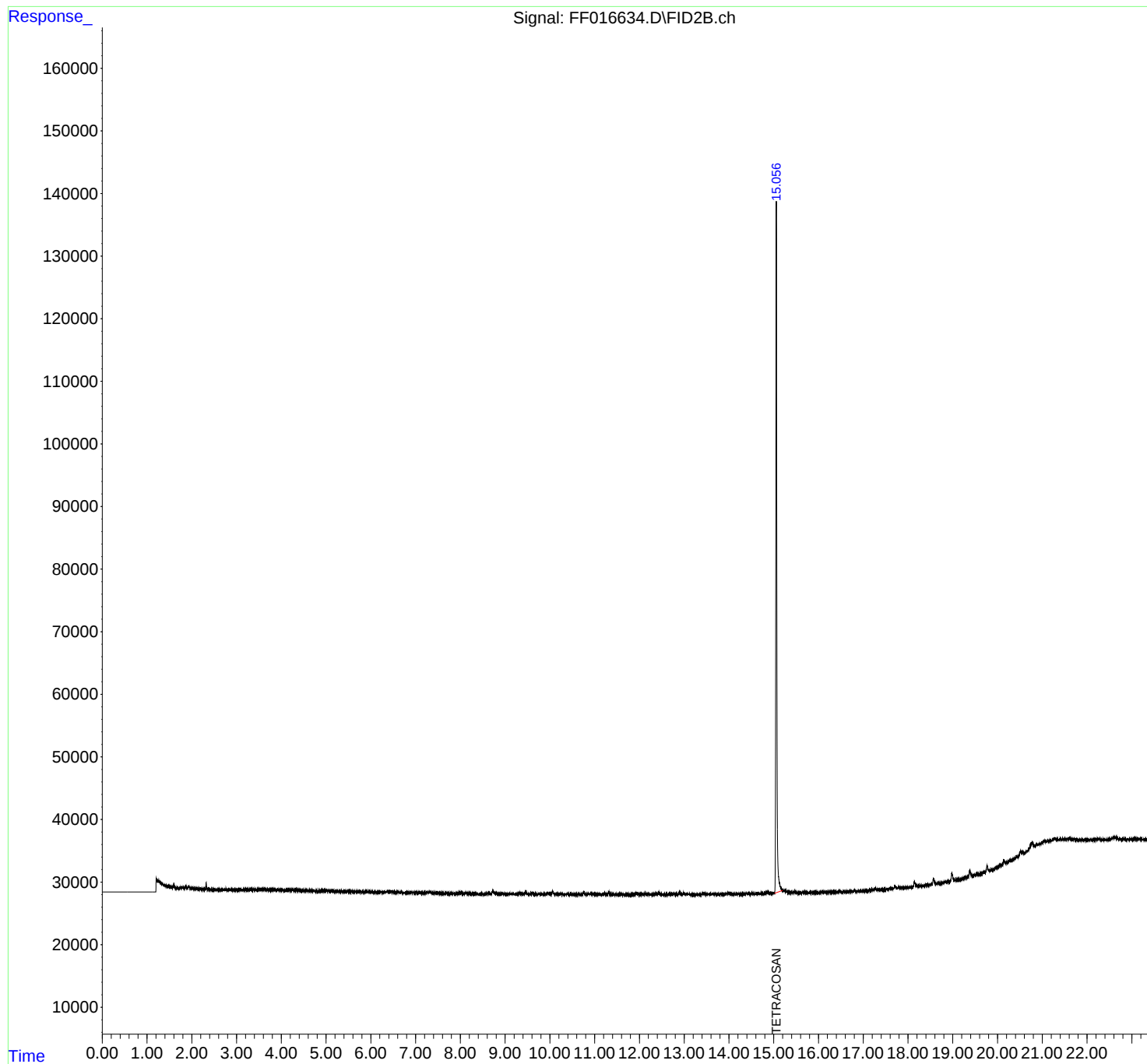
(m)=manual int.

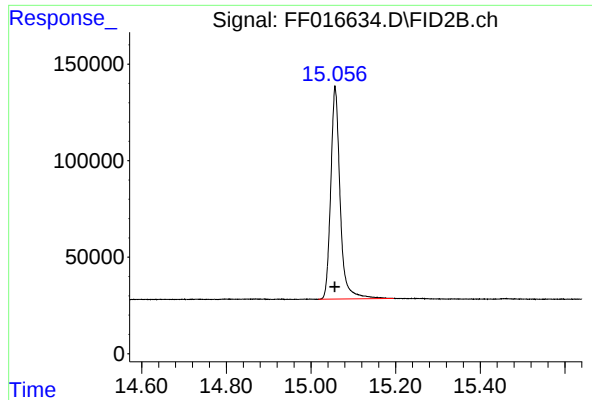
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF103025\
Data File : FF016634.D
Signal(s) : FID2B.ch
Acq On : 30 Oct 2025 12:22
Operator : YP\AJ
Sample : PB170324BL
Misc :
ALS Vial : 31 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
PB170324BL

Integration File: autoint1.e
Quant Time: Oct 31 02:20:32 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
Quant Title :
QLast Update : Wed Oct 29 12:48:52 2025
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um





#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 15.057 min
Delta R.T.: 0.001 min
Response: 1694064
Conc: 16.22 ug/ml

Instrument :
FID_F
ClientSampleId :
PB170324BL

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF103025\
Data File : FF016634.D
Signal(s) : FID2B.ch
Acq On : 30 Oct 2025 12:22
Sample : PB170324BL
Misc :
ALS Vial : 31 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	15.057	15.017	15.195	BB	110117	1694064	100.00%	100.000%
Sum of corrected areas:						1694064		

FF102925.M Fri Oct 31 03:40:17 2025

Report of Analysis

Client:	AECOM		Date Collected:	10/30/25
Project:	AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206		Date Received:	10/30/25
Client Sample ID:	PIBLK-FF016631.D		SDG No.:	Q3434
Lab Sample ID:	I.BLK-FF016631.D		Matrix:	Water
Analytical Method:	8015D TPH		% Solid:	0
Sample Wt/Vol:	1000 mL	Final Vol:	1 mL	Test:
Prep Method:	SW3510	Prep Date:		TPH GC

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS									
PHC	Petroleum Hydrocarbons	85.0	U	1	12.0	85.0	ug/L	10/30/25	FF103025
SURROGATES									
16416-32-3	TETRACOSANE-d50	17.9			29 - 130	90%	SPK: 20		

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF103025\
Data File : FF016631.D
Signal(s) : FID2B.ch
Acq On : 30 Oct 2025 10:24
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: Oct 31 02:19:35 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
Quant Title :
QLast Update : Wed Oct 29 12:48:52 2025
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.056	1874082	17.938 ug/ml
Target Compounds			

(f)=RT Delta > 1/2 Window

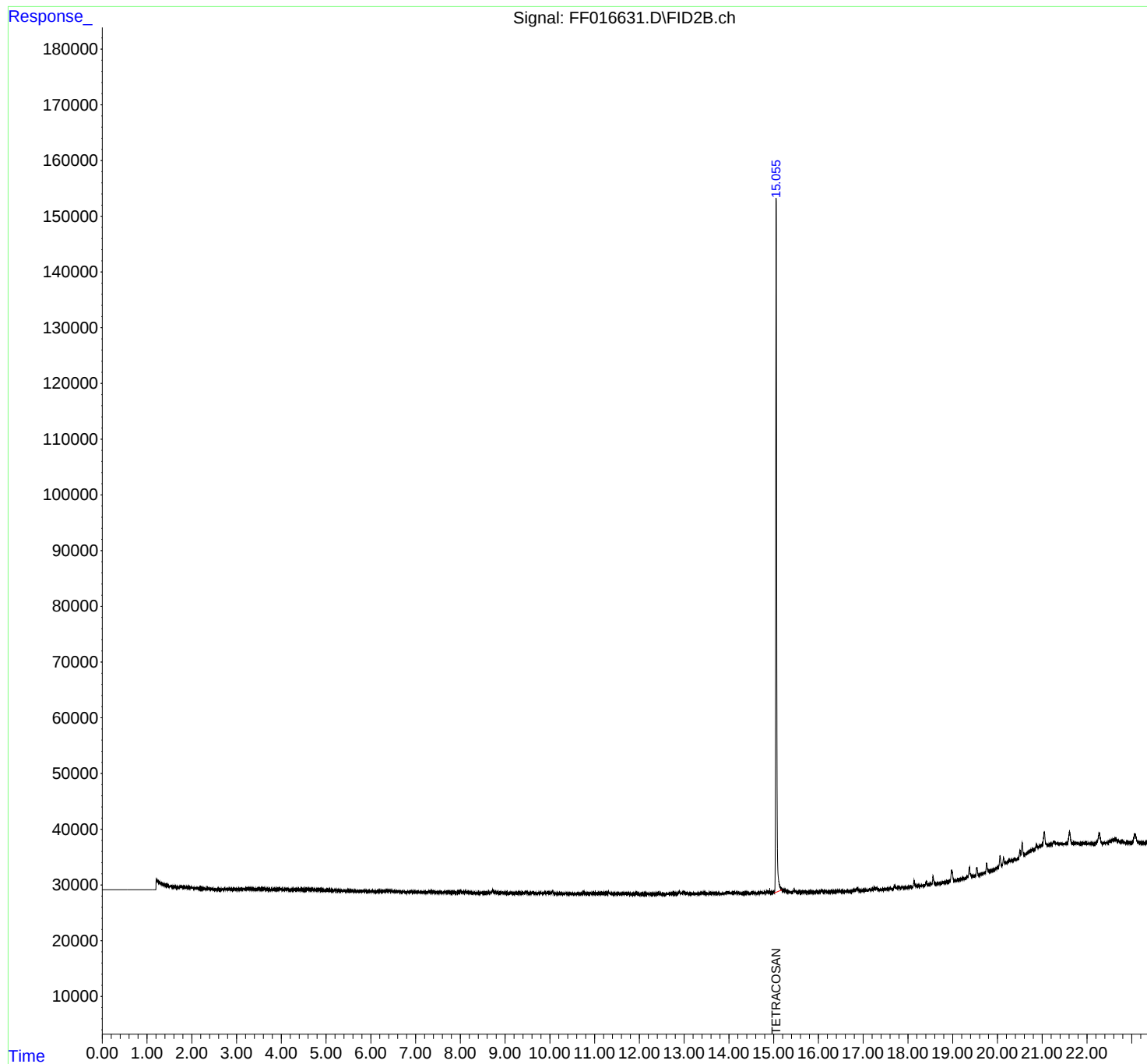
(m)=manual int.

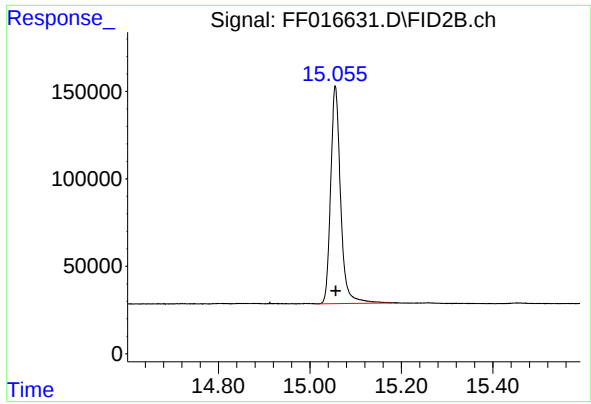
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF103025\
Data File : FF016631.D
Signal(s) : FID2B.ch
Acq On : 30 Oct 2025 10:24
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: Oct 31 02:19:35 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
Quant Title :
QLast Update : Wed Oct 29 12:48:52 2025
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um





#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 15.056 min
Delta R.T.: 0.000 min
Response: 1874082
Conc: 17.94 ug/ml

Instrument :
FID_F
ClientSampleId :
I.BLK

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF103025\
Data File : FF016631.D
Signal(s) : FID2B.ch
Acq On : 30 Oct 2025 10:24
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	15.056	15.014	15.179	BB	124482	1874082	100.00%	100.000%
Sum of corrected areas:						1874082		

FF102925.M Fri Oct 31 03:39:02 2025

Report of Analysis

Client:	AECOM		Date Collected:	10/30/25
Project:	AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206		Date Received:	10/30/25
Client Sample ID:	PIBLK-FF016641.D		SDG No.:	Q3434
Lab Sample ID:	I.BLK-FF016641.D		Matrix:	Water
Analytical Method:	8015D TPH		% Solid:	0
Sample Wt/Vol:	1000 mL	Final Vol:	1 mL	Test:
Prep Method:	SW3510	Prep Date:		TPH GC

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS									
PHC	Petroleum Hydrocarbons	85.0	U	1	12.0	85.0	ug/L	10/30/25	FF103025
SURROGATES									
16416-32-3	TETRACOSANE-d50	18.6			29 - 130	93%	SPK: 20		

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF103025\
Data File : FF016641.D
Signal(s) : FID2B.ch
Acq On : 30 Oct 2025 15:49
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: Oct 31 02:22:59 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
Quant Title :
QLast Update : Wed Oct 29 12:48:52 2025
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.062	1945668	18.623 ug/ml
Target Compounds			

(f)=RT Delta > 1/2 Window

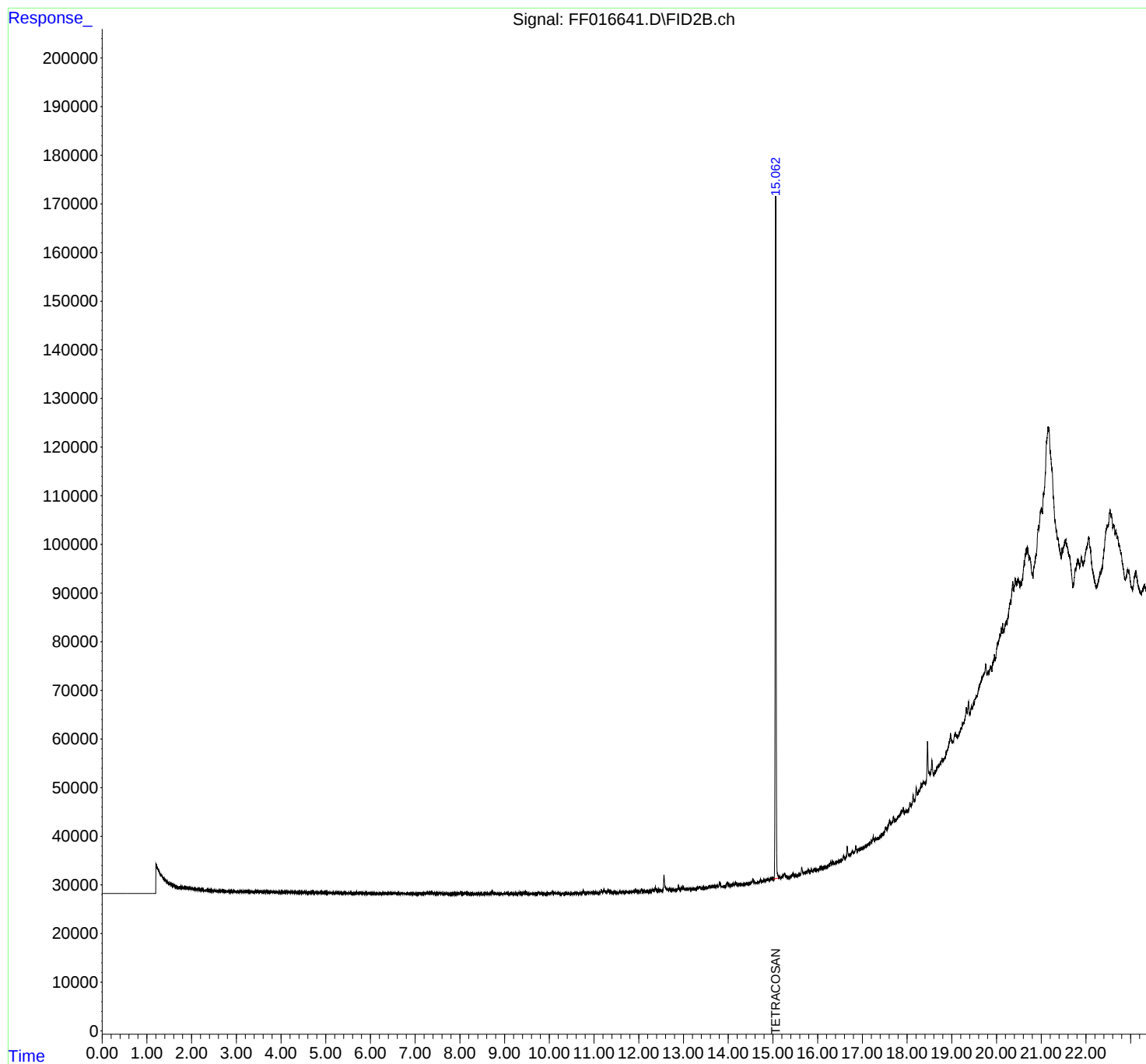
(m)=manual int.

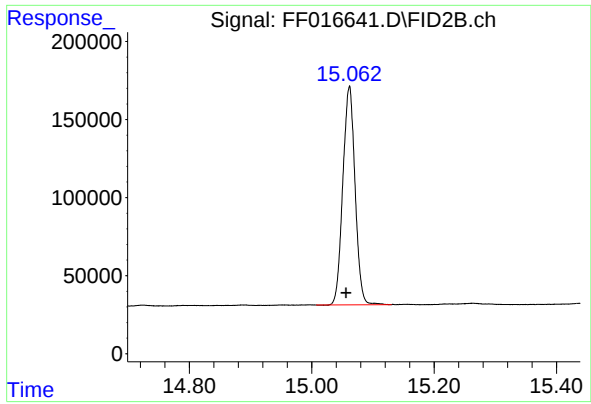
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF103025\
Data File : FF016641.D
Signal(s) : FID2B.ch
Acq On : 30 Oct 2025 15:49
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: Oct 31 02:22:59 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
Quant Title :
QLast Update : Wed Oct 29 12:48:52 2025
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um





#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 15.062 min
Delta R.T.: 0.005 min
Response: 1945668
Conc: 18.62 ug/ml

Instrument :
FID_F
ClientSampleId :
I.BLK

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF103025\
Data File : FF016641.D
Signal(s) : FID2B.ch
Acq On : 30 Oct 2025 15:49
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	15.062	15.007	15.130	BB	140546	1945668	100.00%	100.000%
Sum of corrected areas:						1945668		

FF102925.M Fri Oct 31 03:41:10 2025

Report of Analysis

Client:	AECOM		Date Collected:	
Project:	AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206		Date Received:	
Client Sample ID:	PB170324BS		SDG No.:	Q3434
Lab Sample ID:	PB170324BS		Matrix:	SOIL
Analytical Method:	8015D TPH		% Solid:	100
Sample Wt/Vol:	30.03 g	Final Vol: 1 mL	Test:	TPH GC
Prep Method:	SW3541	Prep Date 10/29/25		

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS									
PHC	Petroleum Hydrocarbons	11300		1	384	2830	ug/kg	10/30/25 12:52	PB170324
SURROGATES									
16416-32-3	TETRACOSANE-d50	18.4			37 - 130	92%	SPK: 20		

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF103025\
 Data File : FF016635.D
 Signal(s) : FID2B.ch
 Acq On : 30 Oct 2025 12:52
 Operator : YP\AJ
 Sample : PB170324BS
 Misc :
 ALS Vial : 32 Sample Multiplier: 1

Instrument :
 FID_F
 ClientSampleId :
 PB170324BS

Integration File: autoint1.e
 Quant Time: Oct 31 02:20:46 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
 Quant Title :
 QLast Update : Wed Oct 29 12:48:52 2025
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1uL
 Signal Phase : Rxi-1ms
 Signal Info : 20mx0.18mmx0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.056	1918098	18.359 ug/ml
Target Compounds			
1) N-OCTANE	2.043	1796883	16.189 ug/ml
2) N-DECANE	4.573	2033504	18.378 ug/ml
3) N-DODECANE	6.751	2071244	18.645 ug/ml
4) N-TETRADECANE	8.584	2121414	18.990 ug/ml
5) N-HEXADECANE	10.193	2143776	19.080 ug/ml
6) N-OCTADECANE	11.639	2219710	18.967 ug/ml
7) N-EICOSANE	12.953	2306165	18.887 ug/ml
8) N-DOCOSANE	14.154	2252846	18.899 ug/ml
10) N-TETRACOSANE	15.261	2255410	19.035 ug/ml
11) N-HEXACOSANE	16.286	2193001	19.090 ug/ml
12) N-OCTACOSANE	17.239	2173702	19.075 ug/ml
13) N-TRIACONTANE	18.130	2160479	19.229 ug/ml
14) N-DOTRIACONTANE	18.967	2208427	20.602 ug/ml
15) N-TETRATRIACONTANE	19.754	2373945	24.159 ug/ml
16) N-HEXATRIACONTANE	20.496	2266182	26.502 ug/ml
17) N-OCTATRIACONTANE	21.254	1990960	25.940 ug/ml
18) N-TETRACONTANE	22.200	1660480	24.330 ug/ml

(f)=RT Delta > 1/2 Window

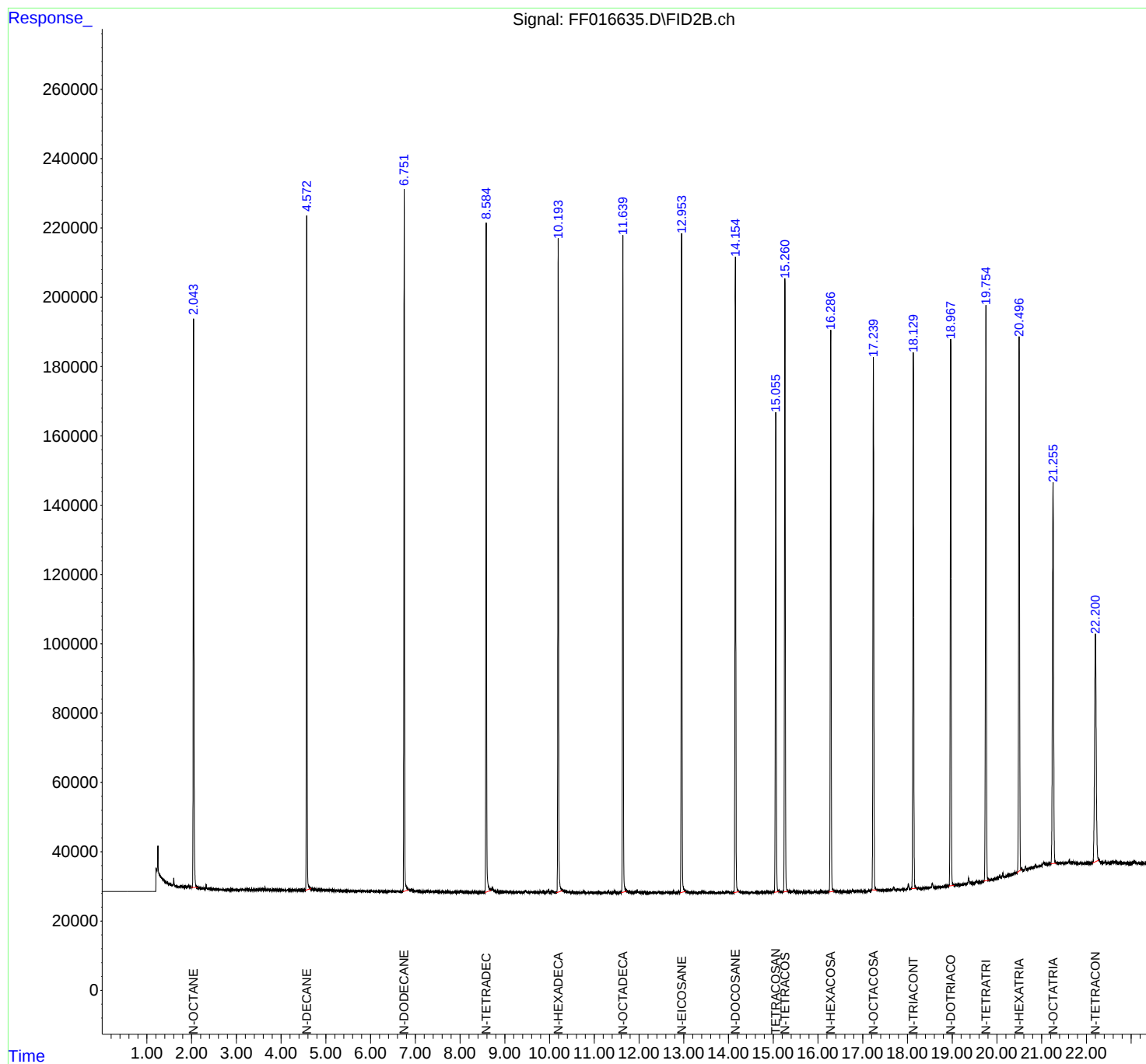
(m)=manual int.

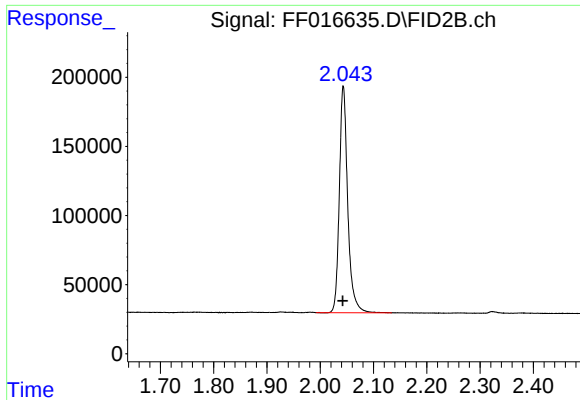
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF103025\
Data File : FF016635.D
Signal(s) : FID2B.ch
Acq On : 30 Oct 2025 12:52
Operator : YP\AJ
Sample : PB170324BS
Misc :
ALS Vial : 32 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
PB170324BS

Integration File: autoint1.e
Quant Time: Oct 31 02:20:46 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
Quant Title :
QLast Update : Wed Oct 29 12:48:52 2025
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um

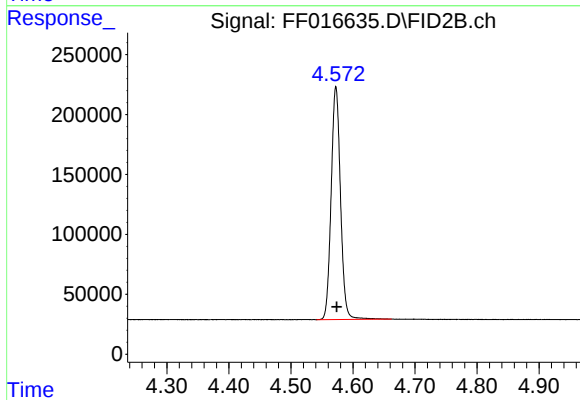




#1 N-OCTANE

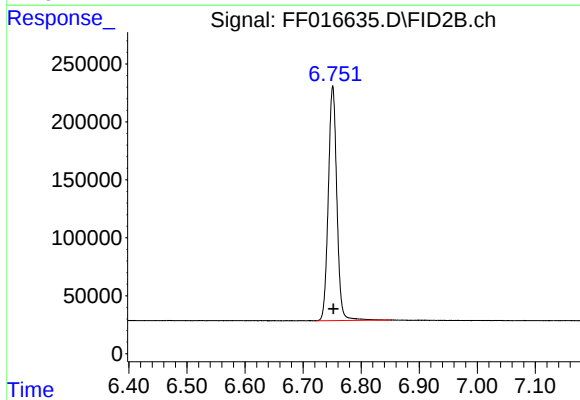
R.T.: 2.043 min
Delta R.T.: 0.001 min
Response: 1796883
Conc: 16.19 ug/ml

Instrument :
FID_F
ClientSampleId :
PB170324BS



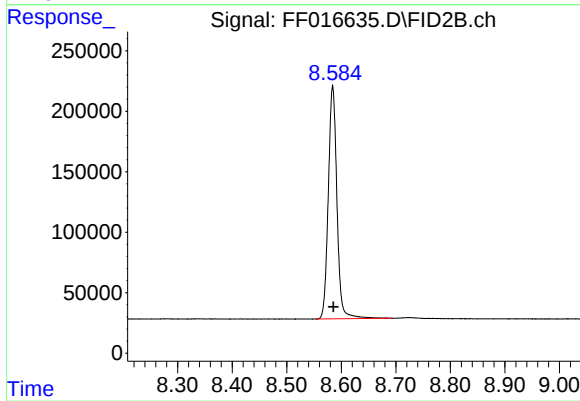
#2 N-DECANE

R.T.: 4.573 min
Delta R.T.: -0.001 min
Response: 2033504
Conc: 18.38 ug/ml



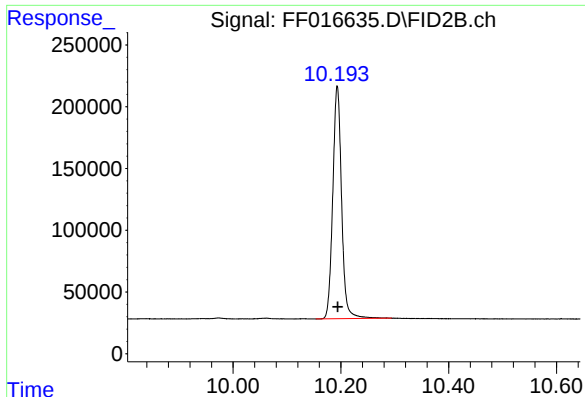
#3 N-DODECANE

R.T.: 6.751 min
Delta R.T.: -0.001 min
Response: 2071244
Conc: 18.65 ug/ml



#4 N-TETRADECANE

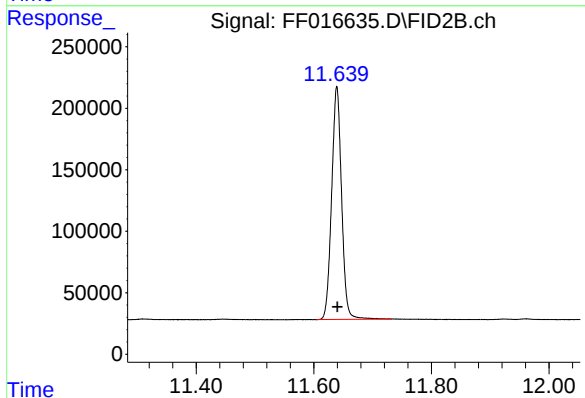
R.T.: 8.584 min
Delta R.T.: -0.001 min
Response: 2121414
Conc: 18.99 ug/ml



#5 N-HEXADECANE

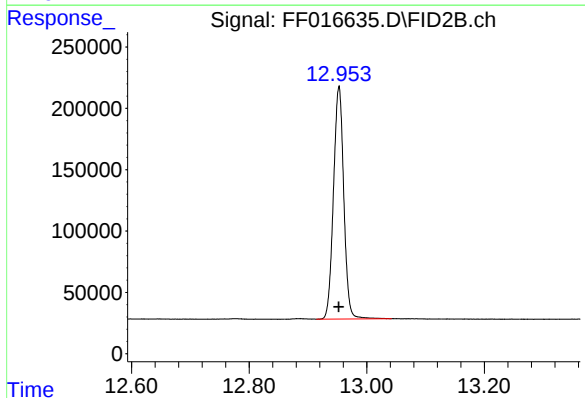
R.T.: 10.193 min
Delta R.T.: -0.001 min
Response: 2143776
Conc: 19.08 ug/ml

Instrument :
FID_F
ClientSampleId :
PB170324BS



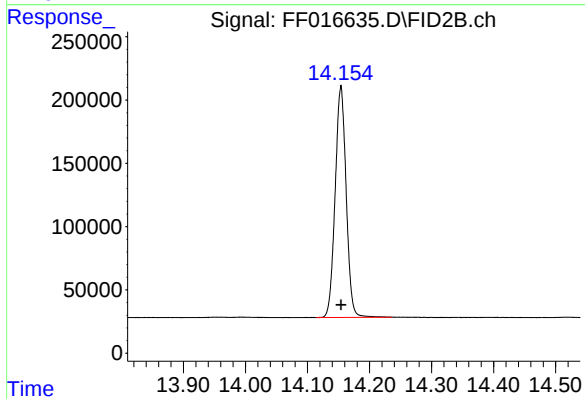
#6 N-OCTADECANE

R.T.: 11.639 min
Delta R.T.: 0.000 min
Response: 2219710
Conc: 18.97 ug/ml



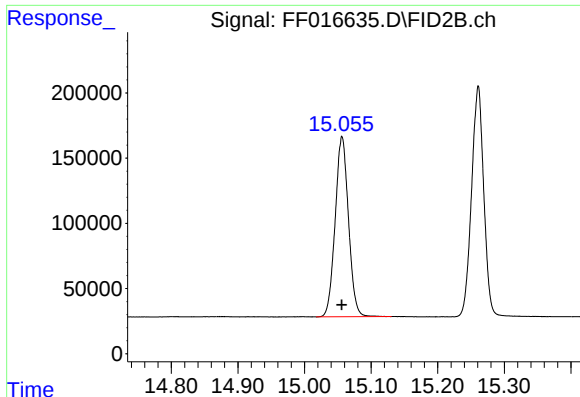
#7 N-EICOSANE

R.T.: 12.953 min
Delta R.T.: 0.000 min
Response: 2306165
Conc: 18.89 ug/ml



#8 N-DOCOSANE

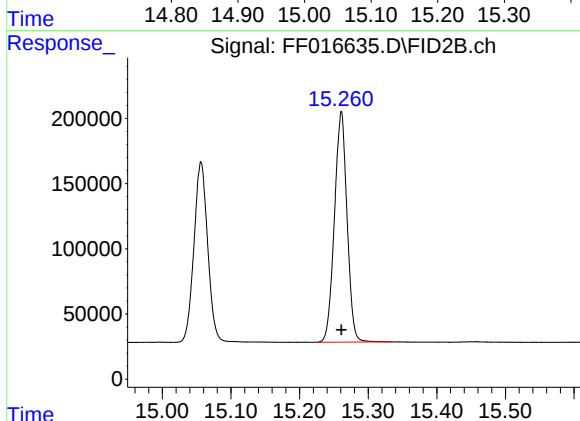
R.T.: 14.154 min
Delta R.T.: 0.000 min
Response: 2252846
Conc: 18.90 ug/ml



#9 TETRACOSANE-d50 (SURROGATE)

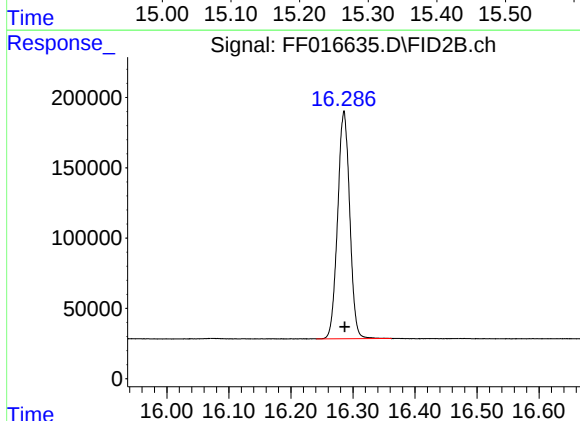
R.T.: 15.056 min
Delta R.T.: 0.000 min
Response: 1918098
Conc: 18.36 ug/ml

Instrument :
FID_F
ClientSampleId :
PB170324BS



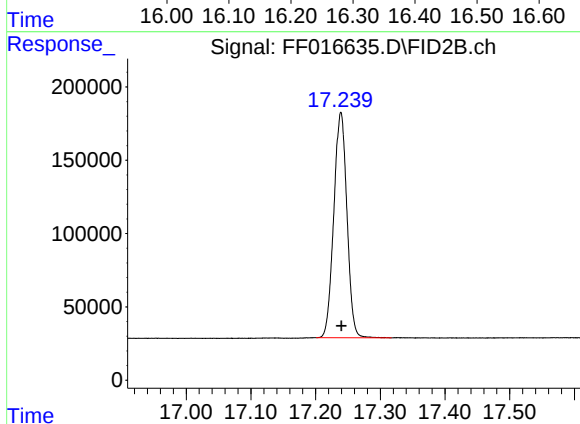
#10 N-TETRACOSANE

R.T.: 15.261 min
Delta R.T.: 0.000 min
Response: 2255410
Conc: 19.03 ug/ml



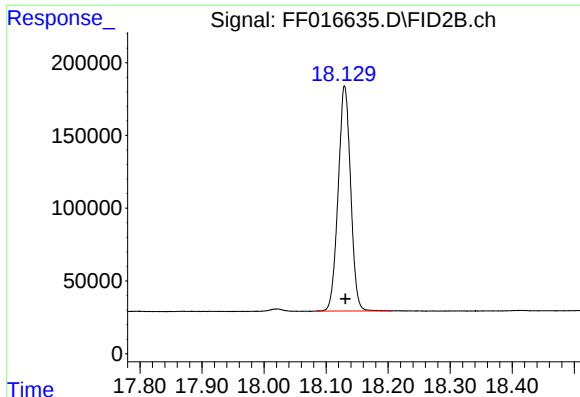
#11 N-HEXACOSANE

R.T.: 16.286 min
Delta R.T.: -0.001 min
Response: 2193001
Conc: 19.09 ug/ml



#12 N-OCTACOSANE

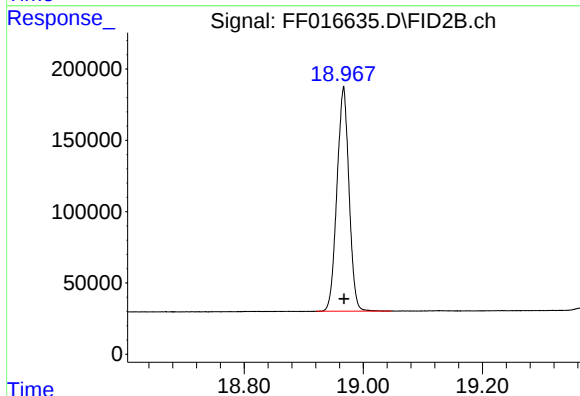
R.T.: 17.239 min
Delta R.T.: -0.001 min
Response: 2173702
Conc: 19.08 ug/ml



#13 N-TRIACONTANE

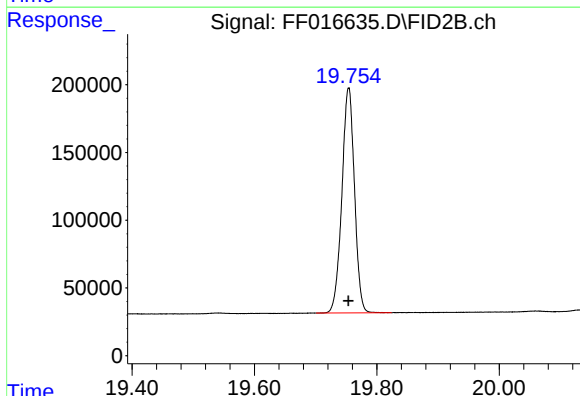
R.T.: 18.130 min
Delta R.T.: 0.000 min
Response: 2160479
Conc: 19.23 ug/ml

Instrument :
FID_F
ClientSampleId :
PB170324BS



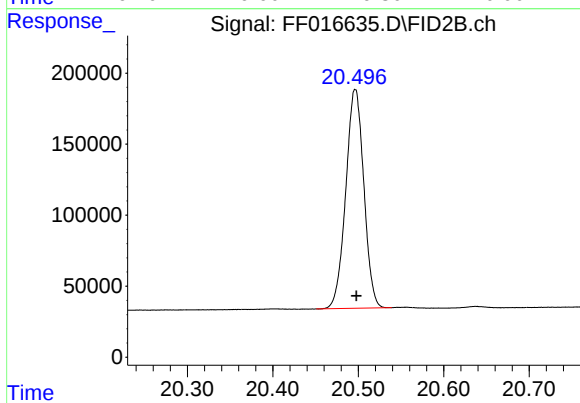
#14 N-DOTRIACONTANE

R.T.: 18.967 min
Delta R.T.: 0.000 min
Response: 2208427
Conc: 20.60 ug/ml



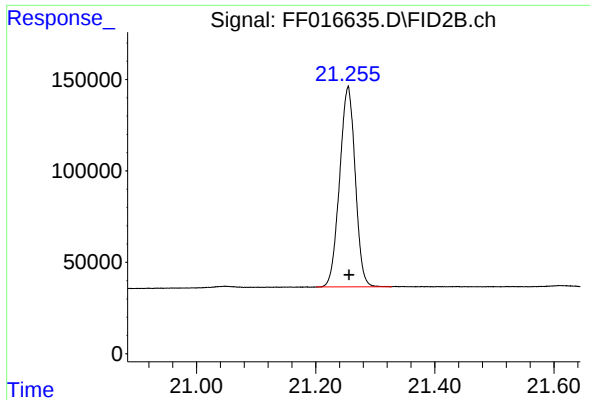
#15 N-TETRATRIACONTANE

R.T.: 19.754 min
Delta R.T.: 0.000 min
Response: 2373945
Conc: 24.16 ug/ml



#16 N-HEXATRIACONTANE

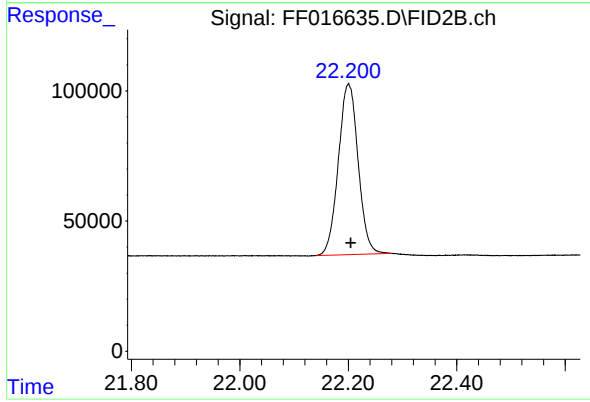
R.T.: 20.496 min
Delta R.T.: -0.001 min
Response: 2266182
Conc: 26.50 ug/ml



#17 N-OCTATRIACONTANE

R.T.: 21.254 min
Delta R.T.: -0.002 min
Response: 1990960
Conc: 25.94 ug/ml

Instrument :
FID_F
ClientSampleId :
PB170324BS



#18 N-TETRACONTANE

R.T.: 22.200 min
Delta R.T.: -0.004 min
Response: 1660480
Conc: 24.33 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF103025\
Data File : FF016635.D
Signal(s) : FID2B.ch
Acq On : 30 Oct 2025 12:52
Sample : PB170324BS
Misc :
ALS Vial : 32 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	2.043	1.992	2.134	BB	163811	1796883	75.69%	4.711%
2	4.573	4.541	4.662	BB	194476	2033504	85.66%	5.331%
3	6.751	6.722	6.852	BB	202027	2071244	87.25%	5.430%
4	8.584	8.554	8.692	BB	192537	2121414	89.36%	5.561%
5	10.193	10.154	10.294	BB	188465	2143776	90.30%	5.620%
6	11.639	11.604	11.732	BB	189509	2219710	93.50%	5.819%
7	12.953	12.914	13.042	BB	189203	2306165	97.14%	6.046%
8	14.154	14.114	14.236	BB	183142	2252846	94.90%	5.906%
9	15.056	15.017	15.131	BB	138508	1918098	80.80%	5.028%
10	15.261	15.224	15.334	BB	177194	2255410	95.01%	5.913%
11	16.286	16.241	16.362	BB	162229	2193001	92.38%	5.749%
12	17.239	17.201	17.317	BB	153882	2173702	91.56%	5.698%
13	18.130	18.084	18.206	BB	154986	2160479	91.01%	5.664%
14	18.967	18.921	19.047	BB	157876	2208427	93.03%	5.789%
15	19.754	19.701	19.824	BB	166064	2373945	100.00%	6.223%
16	20.496	20.451	20.539	BV	154354	2266182	95.46%	5.941%
17	21.254	21.201	21.327	BB	109379	1990960	83.87%	5.219%
18	22.200	22.141	22.280	BBA	65813	1660480	69.95%	4.353%
Sum of corrected areas:							38146225	

FF102925.M Fri Oct 31 03:40:46 2025

Report of Analysis

Client:	AECOM		Date Collected:	10/27/25
Project:	AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206		Date Received:	10/27/25
Client Sample ID:	WASTEMS		SDG No.:	Q3434
Lab Sample ID:	Q3474-01MS		Matrix:	SOIL
Analytical Method:	8015D TPH		% Solid:	87.2
Sample Wt/Vol:	30.07 g	Final Vol:	1 mL	Test:
Prep Method:	SW3541	Prep Date	10/29/25	TPH GC

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS									
PHC	Petroleum Hydrocarbons	93000	E	1	439	3240	ug/kg	10/30/25 14:21	PB170324
SURROGATES									
16416-32-3	TETRACOSANE-d50	11.3			37 - 130	56%	SPK: 20		

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF103025\
 Data File : FF016638.D
 Signal(s) : FID2B.ch
 Acq On : 30 Oct 2025 14:21
 Operator : YP\AJ
 Sample : Q3474-01MS
 Misc :
 ALS Vial : 35 Sample Multiplier: 1

Instrument :
 FID_F
 ClientSampleId :
 WASTEMS

Manual Integrations
 APPROVED

Reviewed By :Rahul Chavli 10/31/2025
 Supervised By :Yogesh Patel 10/31/2025

Integration File: autoint1.e
 Quant Time: Oct 31 02:21:49 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
 Quant Title :
 QLast Update : Wed Oct 29 12:48:52 2025
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1uL
 Signal Phase : Rxi-1ms
 Signal Info : 20mx0.18mmx0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.058	1177063	11.266 ug/ml
Target Compounds			
1) N-OCTANE	2.059	1769933	15.946 ug/ml
2) N-DECANE	4.576	2153319	19.461 ug/ml
3) N-DODECANE	6.752	2216916	19.957 ug/ml
4) N-TETRADECANE	8.585	2224368	19.911 ug/ml
5) N-HEXADECANE	10.194	2397697	21.340 ug/ml
6) N-OCTADECANE	11.641	2542507	21.726 ug/ml
7) N-EICOSANE	12.954	2383135	19.517 ug/ml
8) N-DOCOSANE	14.157	2527752	21.205 ug/ml
10) N-TETRACOSANE	15.263	2230504	18.825 ug/ml
11) N-HEXACOSANE	16.291	2159688	18.800 ug/ml
12) N-OCTACOSANE	17.244	2312212	20.290 ug/ml
13) N-TRIACONTANE	18.137	2840719	25.283 ug/ml
14) N-DOTRIACONTANE	18.974	3388503	31.610 ug/mlm
15) N-TETRATRIACONTANE	19.763	2904871	29.563 ug/ml
16) N-HEXATRIACONTANE	20.506	2626543	30.717 ug/ml
17) N-OCTATRIACONTANE	21.266	2609516	33.999 ug/mlm
18) N-TETRACONTANE	22.216	2877423	42.162 ug/mlm

(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF103025\
Data File : FF016638.D
Signal(s) : FID2B.ch
Acq On : 30 Oct 2025 14:21
Operator : YP\AJ
Sample : Q3474-01MS
Misc :
ALS Vial : 35 Sample Multiplier: 1

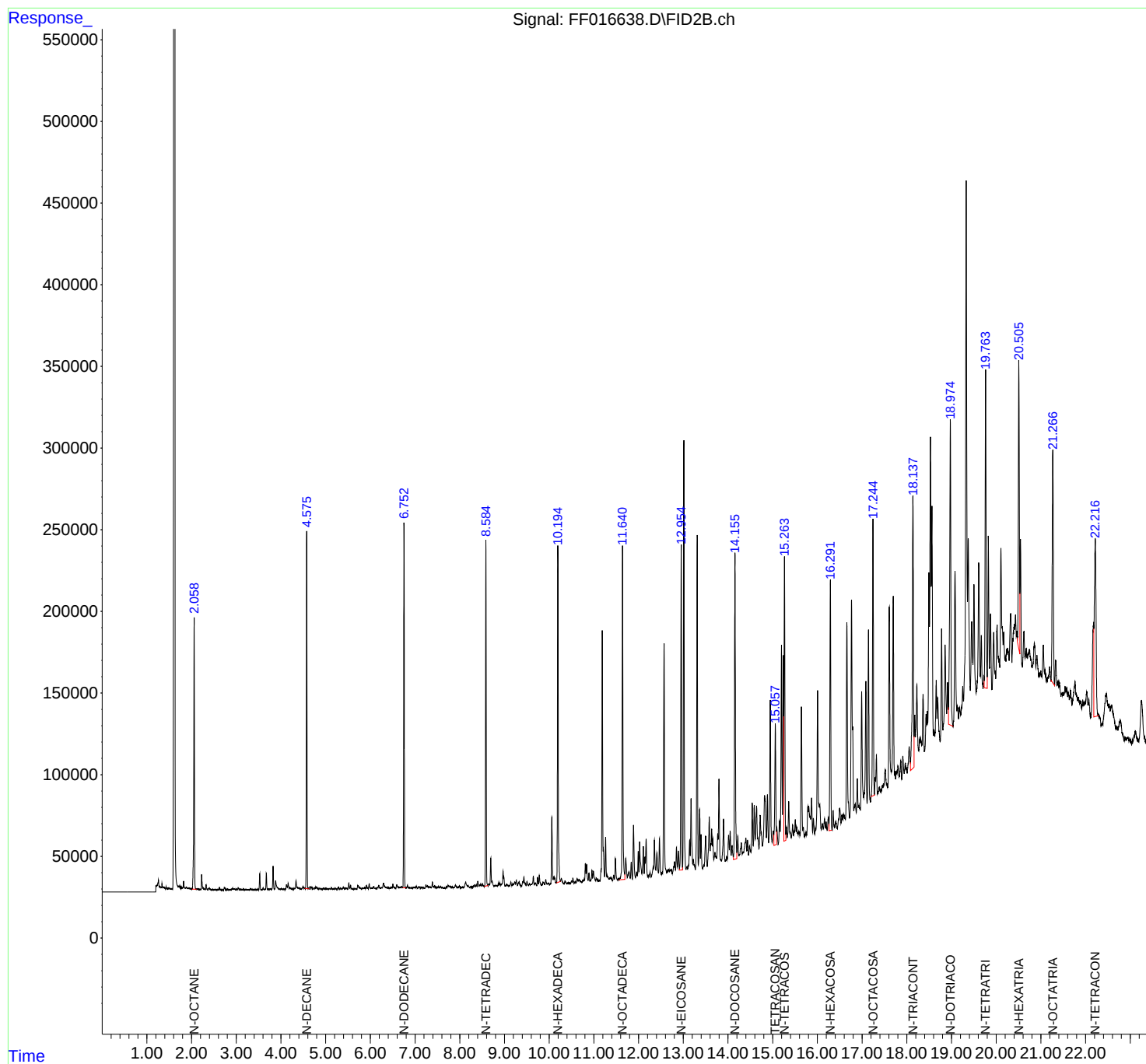
Instrument :
FID_F
ClientSampleId :
WASTEMS

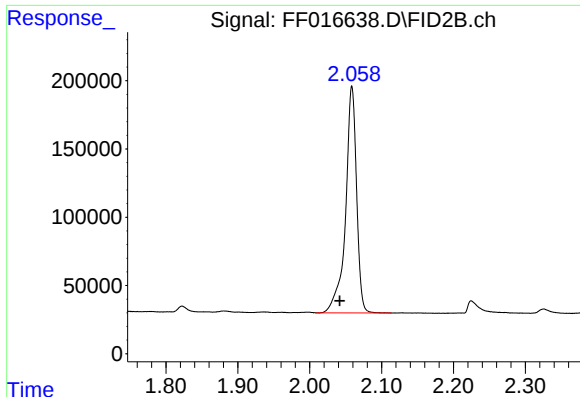
Manual Integrations
APPROVED

Reviewed By :Rahul Chavli 10/31/2025
Supervised By :Yogesh Patel 10/31/2025

Integration File: autoint1.e
Quant Time: Oct 31 02:21:49 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
Quant Title :
QLast Update : Wed Oct 29 12:48:52 2025
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um





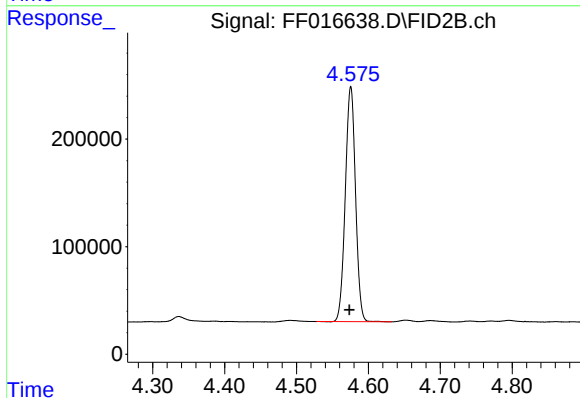
#1 N-OCTANE

R.T.: 2.059 min
Delta R.T.: 0.017 min
Response: 1769933
Conc: 15.95 ug/ml

Instrument :
FID_F
ClientSampleId :
WASTEMS

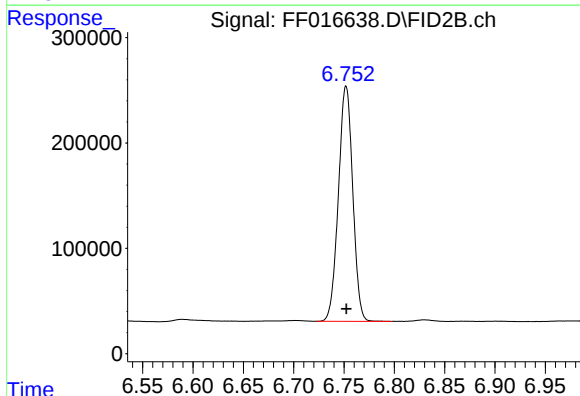
Manual Integrations
APPROVED

Reviewed By :Rahul Chavli 10/31/2025
Supervised By :Yogesh Patel 10/31/2025



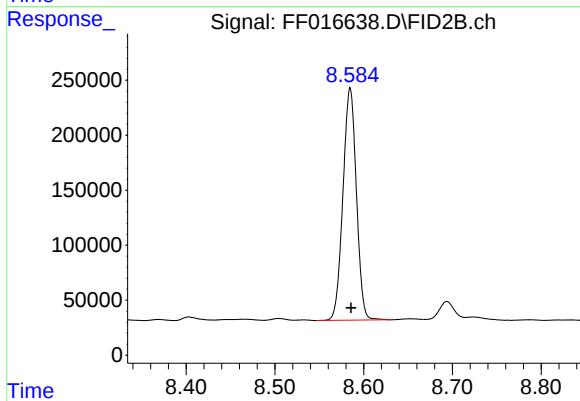
#2 N-DECANE

R.T.: 4.576 min
Delta R.T.: 0.002 min
Response: 2153319
Conc: 19.46 ug/ml



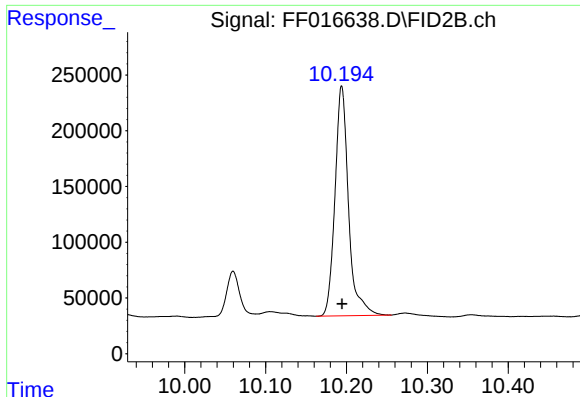
#3 N-DODECANE

R.T.: 6.752 min
Delta R.T.: 0.000 min
Response: 2216916
Conc: 19.96 ug/ml



#4 N-TETRADECANE

R.T.: 8.585 min
Delta R.T.: 0.000 min
Response: 2224368
Conc: 19.91 ug/ml



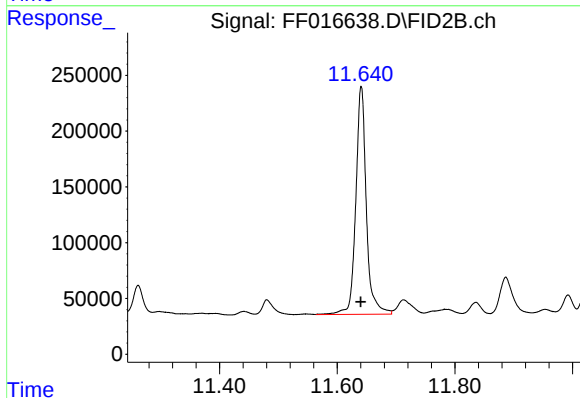
#5 N-HEXADECANE

R.T.: 10.194 min
Delta R.T.: 0.000 min
Response: 2397697
Conc: 21.34 ug/ml

Instrument :
FID_F
ClientSampleId :
WASTEMS

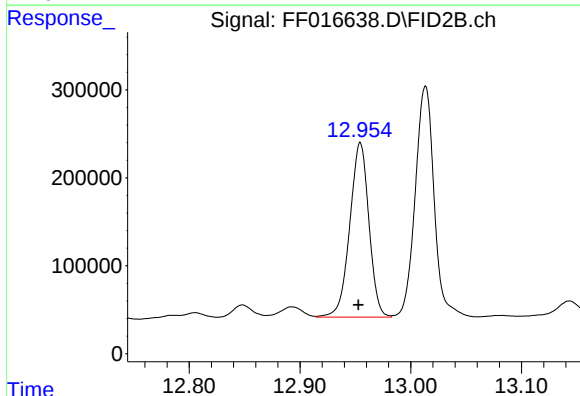
Manual Integrations
APPROVED

Reviewed By :Rahul Chavli 10/31/2025
Supervised By :Yogesh Patel 10/31/2025



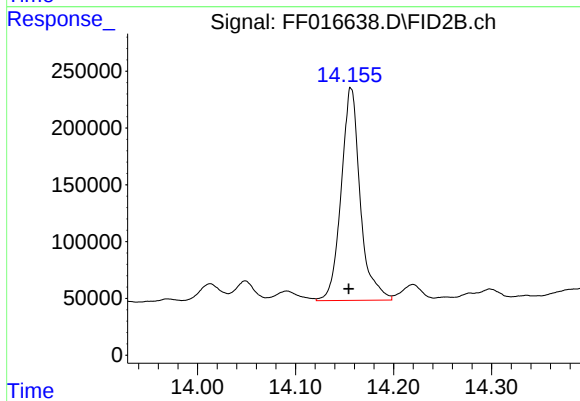
#6 N-OCTADECANE

R.T.: 11.641 min
Delta R.T.: 0.000 min
Response: 2542507
Conc: 21.73 ug/ml



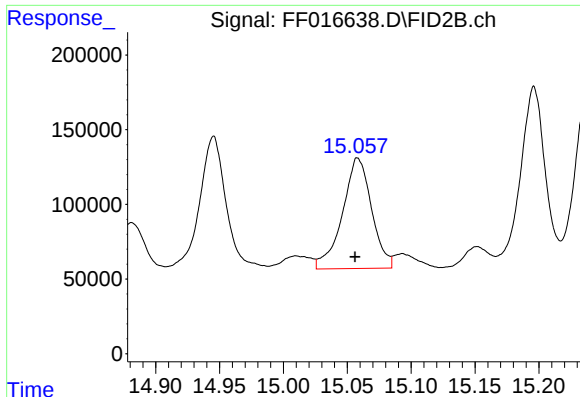
#7 N-EICOSANE

R.T.: 12.954 min
Delta R.T.: 0.002 min
Response: 2383135
Conc: 19.52 ug/ml



#8 N-DOCOSANE

R.T.: 14.157 min
Delta R.T.: 0.002 min
Response: 2527752
Conc: 21.21 ug/ml



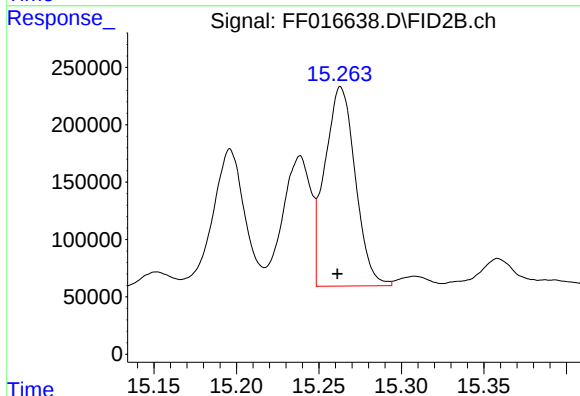
#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 15.058 min
Delta R.T.: 0.002 min
Response: 1177063
Conc: 11.27 ug/ml

Instrument :
FID_F
ClientSampleId :
WASTEMS

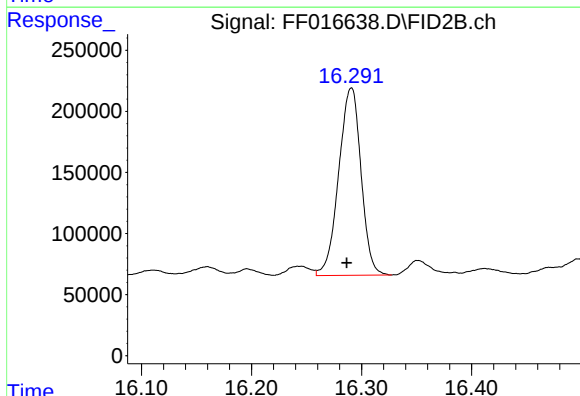
Manual Integrations
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Reviewed By :Rahul Chavli 10/31/2025
Supervised By :Yogesh Patel 10/31/2025



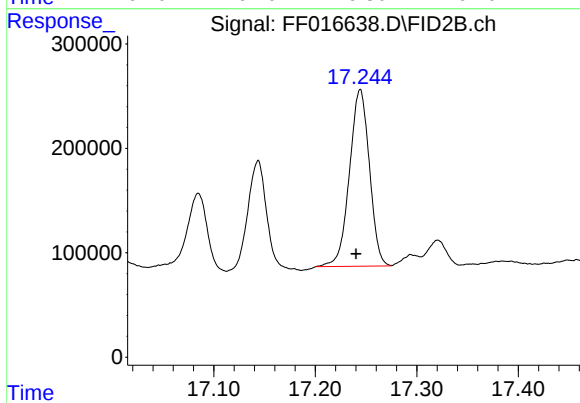
#10 N-TETRACOSANE

R.T.: 15.263 min
Delta R.T.: 0.002 min
Response: 2230504
Conc: 18.82 ug/ml



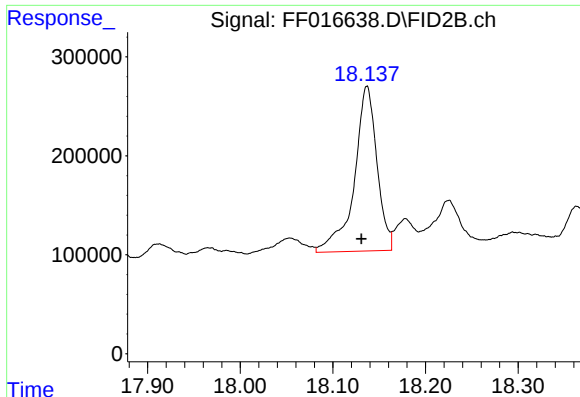
#11 N-HEXACOSANE

R.T.: 16.291 min
Delta R.T.: 0.004 min
Response: 2159688
Conc: 18.80 ug/ml



#12 N-OCTACOSANE

R.T.: 17.244 min
Delta R.T.: 0.004 min
Response: 2312212
Conc: 20.29 ug/ml



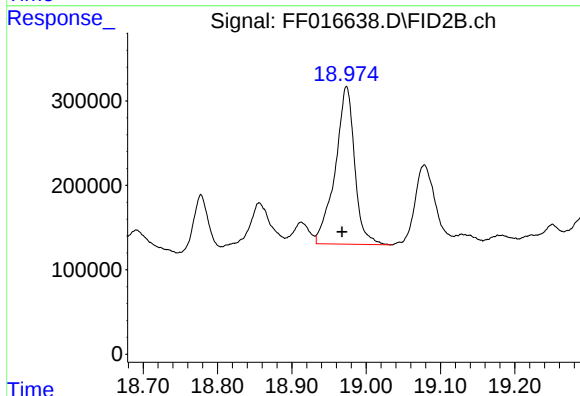
#13 N-TRIACONTANE

R.T.: 18.137 min
Delta R.T.: 0.006 min
Response: 2840719
Conc: 25.28 ug/ml

Instrument :
FID_F
ClientSampleId :
WASTEMS

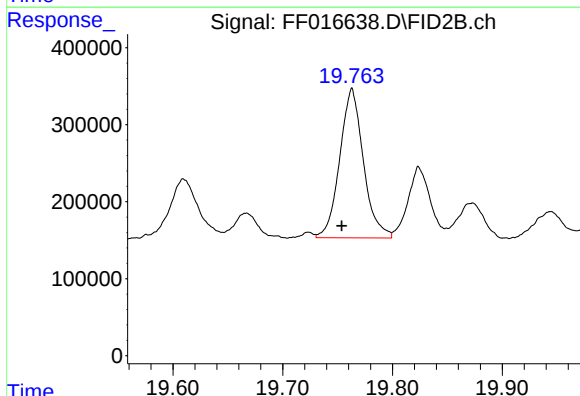
Manual Integrations
APPROVED

Reviewed By :Rahul Chavli 10/31/2025
Supervised By :Yogesh Patel 10/31/2025



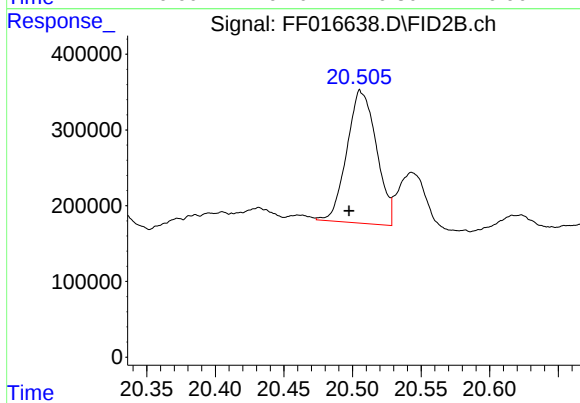
#14 N-DOTRIACONTANE

R.T.: 18.974 min
Delta R.T.: 0.006 min
Response: 3388503
Conc: 31.61 ug/ml m



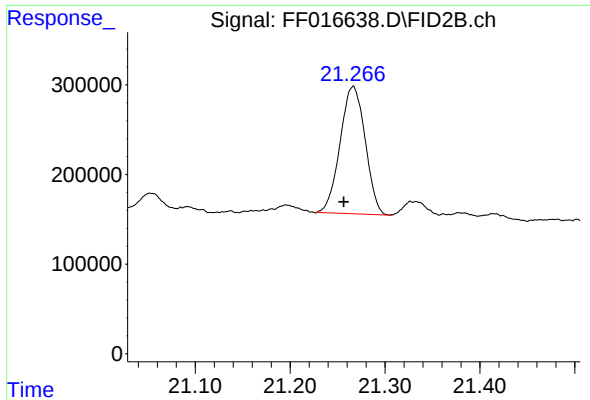
#15 N-TETRATRIACONTANE

R.T.: 19.763 min
Delta R.T.: 0.009 min
Response: 2904871
Conc: 29.56 ug/ml



#16 N-HEXATRIACONTANE

R.T.: 20.506 min
Delta R.T.: 0.008 min
Response: 2626543
Conc: 30.72 ug/ml



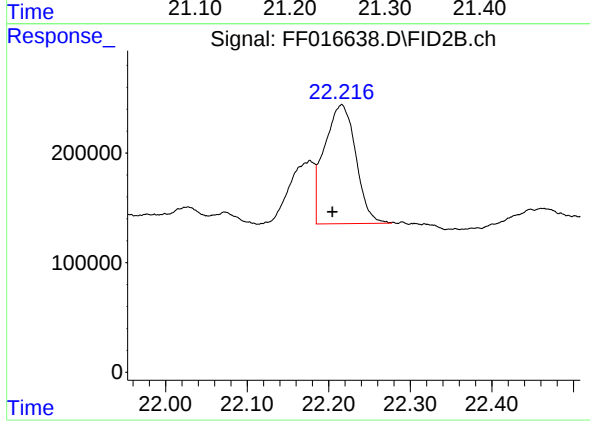
#17 N-OCTATRIACONTANE

R.T.: 21.266 min
Delta R.T.: 0.010 min
Response: 2609516
Conc: 34.00 ug/ml

Instrument :
FID_F
ClientSampleId :
WASTEMS

Manual Integrations
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Reviewed By :Rahul Chavli 10/31/2025
Supervised By :Yogesh Patel 10/31/2025



#18 N-TETRACONTANE

R.T.: 22.216 min
Delta R.T.: 0.011 min
Response: 2877423
Conc: 42.16 ug/ml m

Instrument :

FID_F

ClientSampleId :

WASTEMS

rteres

Area Percent Report

Manual IntegrationsAPPROVED

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF10302
Data File : FF016638.D
Signal(s) : FID2B.ch
Acq On : 30 Oct 2025 14:21
Sample : Q3474-01MS
Misc :
ALS Vial : 35 Sample Multiplier: 1

Reviewed By :Rahul Chavli 10/31/2025
Supervised By :Yogesh Patel 10/31/2025

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	1.936	1.906	1.952	BV	376	2290	0.03%	0.001%
2	1.961	1.952	1.974	PV	263	1579	0.02%	0.001%
3	1.997	1.974	2.013	VV	463	4686	0.06%	0.002%
4	2.059	2.013	2.123	PV	166312	1773335	21.20%	0.680%
5	2.128	2.123	2.149	VV	253	2051	0.02%	0.001%
6	2.151	2.149	2.189	VV	187	1225	0.01%	0.000%
7	2.208	2.189	2.215	PV	181	1824	0.02%	0.001%
8	2.225	2.215	2.307	VV	9112	109280	1.31%	0.042%
9	2.326	2.307	2.365	VV	3207	35765	0.43%	0.014%
10	2.396	2.365	2.441	VV	998	20269	0.24%	0.008%
11	2.468	2.441	2.493	VV	282	5747	0.07%	0.002%
12	2.500	2.493	2.517	VV	288	3056	0.04%	0.001%
13	2.529	2.517	2.558	VV	257	4374	0.05%	0.002%
14	2.566	2.558	2.590	VV	130	1595	0.02%	0.001%
15	2.624	2.590	2.685	VV	1736	23187	0.28%	0.009%
16	2.690	2.685	2.700	VV	100	590	0.01%	0.000%
17	2.734	2.700	2.773	PV	1752	30262	0.36%	0.012%
18	2.800	2.773	2.821	VV	522	9293	0.11%	0.004%
19	2.829	2.821	2.840	VV	378	3422	0.04%	0.001%
20	2.843	2.840	2.871	VV	339	5325	0.06%	0.002%
21	2.917	2.871	2.943	VV	1007	24438	0.29%	0.009%
22	2.955	2.943	2.984	VV	773	13575	0.16%	0.005%
23	3.010	2.984	3.024	VV	613	11345	0.14%	0.004%
24	3.045	3.024	3.086	VV	1525	25686	0.31%	0.010%
25	3.102	3.086	3.149	VV	592	11685	0.14%	0.004%
26	3.165	3.149	3.201	VV	446	8105	0.10%	0.003%
27	3.218	3.201	3.258	VV	356	8082	0.10%	0.003%
28	3.262	3.258	3.287	VV	173	1753	0.02%	0.001%
29	3.320	3.287	3.360	VV	793	15066	0.18%	0.006%
30	3.364	3.360	3.382	VV	211	2831	0.03%	0.001%
31	3.385	3.382	3.405	VV	222	2375	0.03%	0.001%
32	3.416	3.405	3.426	VV	246	2368	0.03%	0.001%
33	3.435	3.426	3.462	VV	306	4566	0.05%	0.002%
34	3.468	3.462	3.475	VV	215	1243	0.01%	0.000%
35	3.487	3.475	3.499	VV	252	3027	0.04%	0.001%
36	3.525	3.499	3.580	VV	10015	106848	1.28%	0.041%

					rters			
37	3.599	3.580	3.620	VV	1226	14254	0.17%	0.005%
38	3.637	3.620	3.650	VV	468	5971		
39	3.673	3.650	3.716	VV	10148	109702		
40	3.733	3.716	3.743	VV	363	4886		
41	3.759	3.743	3.789	VV	839	14689		
42	3.823	3.789	3.857	VV	14584	159670		
43	3.880	3.857	3.979	VV	5561	127880	1.53%	0.049%
44	4.004	3.979	4.055	VV	552	17517	0.21%	0.007%
45	4.062	4.055	4.074	VV	386	3246	0.04%	0.001%
46	4.081	4.074	4.094	VV	297	2914	0.03%	0.001%
47	4.123	4.094	4.142	VV	3136	46552	0.56%	0.018%
48	4.161	4.142	4.186	VV	3976	58454	0.70%	0.022%
49	4.199	4.186	4.253	VV	1260	31684	0.38%	0.012%
50	4.274	4.253	4.283	VV	524	7737	0.09%	0.003%
51	4.298	4.283	4.308	VV	721	9283	0.11%	0.004%
52	4.336	4.308	4.375	VV	5490	89332	1.07%	0.034%
53	4.385	4.375	4.401	VV	1127	15682	0.19%	0.006%
54	4.407	4.401	4.429	VV	833	11451	0.14%	0.004%
55	4.432	4.429	4.469	VV	632	12536	0.15%	0.005%
56	4.491	4.469	4.547	VV	1831	48999	0.59%	0.019%
57	4.576	4.547	4.607	VV	219412	2173070	25.97%	0.833%
58	4.611	4.607	4.633	VV	1013	11309	0.14%	0.004%
59	4.652	4.633	4.670	VV	2036	28170	0.34%	0.011%
60	4.687	4.670	4.724	VV	1638	29736	0.36%	0.011%
61	4.741	4.724	4.756	VV	1181	15995	0.19%	0.006%
62	4.771	4.756	4.782	VV	1200	14494	0.17%	0.006%
63	4.796	4.782	4.846	VV	1797	33440	0.40%	0.013%
64	4.861	4.846	4.875	VV	657	7584	0.09%	0.003%
65	4.884	4.875	4.903	VV	499	5672	0.07%	0.002%
66	4.916	4.903	4.930	VV	359	4045	0.05%	0.002%
67	4.944	4.930	4.975	VV	645	13321	0.16%	0.005%
68	4.980	4.975	5.015	VV	516	9618	0.11%	0.004%
69	5.019	5.015	5.025	VV	382	2324	0.03%	0.001%
70	5.042	5.025	5.061	VV	398	6927	0.08%	0.003%
71	5.084	5.061	5.107	VV	499	8240	0.10%	0.003%
72	5.128	5.107	5.150	VV	1233	15077	0.18%	0.006%
73	5.153	5.150	5.178	VV	216	2288	0.03%	0.001%
74	5.211	5.178	5.251	VV	734	16210	0.19%	0.006%
75	5.280	5.251	5.318	VV	1360	23919	0.29%	0.009%
76	5.337	5.318	5.356	VV	554	9657	0.12%	0.004%
77	5.360	5.356	5.370	VV	413	2781	0.03%	0.001%
78	5.397	5.370	5.418	VV	1352	21749	0.26%	0.008%
79	5.421	5.418	5.446	VV	499	6713	0.08%	0.003%
80	5.459	5.446	5.499	VV	724	13882	0.17%	0.005%
81	5.519	5.499	5.542	VV	3860	46634	0.56%	0.018%
82	5.559	5.542	5.583	VV	2442	29088	0.35%	0.011%
83	5.591	5.583	5.608	VV	306	2991	0.04%	0.001%
84	5.651	5.608	5.688	PV	504	9144	0.11%	0.004%
85	5.720	5.688	5.745	PV	2276	38417	0.46%	0.015%
86	5.754	5.745	5.770	VV	1180	14482	0.17%	0.006%
87	5.781	5.770	5.807	VV	718	10466	0.13%	0.004%
88	5.832	5.807	5.857	VV	600	13692	0.16%	0.005%
89	5.874	5.857	5.891	VV	1280	15079	0.18%	0.006%

Instrument :

FID_F

ClientSampleId :

WASTEMS

Manual IntegrationsAPPROVED

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Supervised By :Yogesh Patel 10/31/2025

90	5.911	5.891	5.936	VV	2252	30050	0.36%	0.012%
91	5.941	5.936	5.954	VV	596	6259		
92	5.974	5.954	6.018	VV	3297	47800		
93	6.031	6.018	6.049	VV	686	8615		
94	6.074	6.049	6.105	VV	1515	23942		
95	6.126	6.105	6.144	VV	452	8369		
96	6.187	6.144	6.224	VV	2259	44208	0.53%	0.017%
97	6.228	6.224	6.239	VV	503	4282	0.05%	0.002%
98	6.253	6.239	6.267	VV	926	12129	0.14%	0.005%
99	6.294	6.267	6.382	VV	3625	103775	1.24%	0.040%
100	6.396	6.382	6.415	VV	1294	16628	0.20%	0.006%
101	6.432	6.415	6.449	VV	614	10287	0.12%	0.004%
102	6.466	6.449	6.481	VV	885	12184	0.15%	0.005%
103	6.505	6.481	6.526	VV	2915	39754	0.48%	0.015%
104	6.531	6.526	6.566	VV	1061	15507	0.19%	0.006%
105	6.590	6.566	6.651	VV	2483	59951	0.72%	0.023%
106	6.702	6.651	6.722	VV	1357	38408	0.46%	0.015%
107	6.752	6.722	6.803	VV	223961	2241660	26.79%	0.859%
108	6.806	6.803	6.810	VV	513	1919	0.02%	0.001%
109	6.830	6.810	6.853	VV	1889	27829	0.33%	0.011%
110	6.868	6.853	6.887	VV	624	10278	0.12%	0.004%
111	6.893	6.887	6.895	VV	561	2360	0.03%	0.001%
112	6.901	6.895	6.927	VV	655	8499	0.10%	0.003%
113	6.979	6.927	6.999	VV	814	23355	0.28%	0.009%
114	7.027	6.999	7.060	VV	1141	23668	0.28%	0.009%
115	7.081	7.060	7.127	VV	1131	25172	0.30%	0.010%
116	7.129	7.127	7.133	VV	338	966	0.01%	0.000%
117	7.154	7.133	7.174	VV	639	11163	0.13%	0.004%
118	7.192	7.174	7.212	VV	362	5652	0.07%	0.002%
119	7.241	7.212	7.258	VV	2223	28934	0.35%	0.011%
120	7.273	7.258	7.322	VV	1415	39271	0.47%	0.015%
121	7.332	7.322	7.355	VV	826	13234	0.16%	0.005%
122	7.387	7.355	7.407	VV	3946	51059	0.61%	0.020%
123	7.418	7.407	7.426	VV	1127	11376	0.14%	0.004%
124	7.437	7.426	7.463	VV	1170	20551	0.25%	0.008%
125	7.477	7.463	7.507	VV	870	15021	0.18%	0.006%
126	7.525	7.507	7.547	VV	1425	17570	0.21%	0.007%
127	7.569	7.547	7.592	VV	1330	19870	0.24%	0.008%
128	7.597	7.592	7.632	VV	588	7250	0.09%	0.003%
129	7.663	7.632	7.669	PV	234	2871	0.03%	0.001%
130	7.678	7.669	7.685	VV	228	1723	0.02%	0.001%
131	7.702	7.685	7.715	VV	1168	11887	0.14%	0.005%
132	7.739	7.715	7.784	VV	1528	45207	0.54%	0.017%
133	7.789	7.784	7.810	VV	805	9893	0.12%	0.004%
134	7.826	7.810	7.851	VV	760	12383	0.15%	0.005%
135	7.854	7.851	7.870	VV	302	2797	0.03%	0.001%
136	7.900	7.870	7.972	VV	1736	41027	0.49%	0.016%
137	7.992	7.972	8.024	VV	1105	16532	0.20%	0.006%
138	8.047	8.024	8.057	VV	441	5907	0.07%	0.002%
139	8.066	8.057	8.084	VV	436	4291	0.05%	0.002%
140	8.132	8.084	8.173	VV	3245	89777	1.07%	0.034%
141	8.187	8.173	8.221	VV	1583	24072	0.29%	0.009%

Instrument :

FID_F

ClientSampleId :

WASTEMS

Manual IntegrationsAPPROVED

Reviewed By :Rahul Chavli 10/31/2025

Supervised By :Yogesh Patel 10/31/2025

Parameters						Instrument : FID_F ClientSampleId : WASTEMS		
142	8.244	8.221	8.258	VV	510	6447	0.08%	0.002%
143	8.280	8.258	8.296	PV	594	8235		
144	8.327	8.296	8.352	VV	1803	32492		
145	8.369	8.352	8.387	VV	1573	21624		
146	8.403	8.387	8.431	VV	3862	54415		
147	8.467	8.431	8.487	VV	1776	44993		
148	8.504	8.487	8.522	VV	2401	31632	0.38%	0.012%
149	8.532	8.522	8.547	VV	1055	11839	0.14%	0.005%
150	8.585	8.547	8.632	VV	212017	2262743	27.05%	0.867%
151	8.652	8.632	8.669	VV	1958	36141	0.43%	0.014%
152	8.694	8.669	8.715	VV	17711	224474	2.68%	0.086%
153	8.724	8.715	8.767	VV	3526	60108	0.72%	0.023%
154	8.786	8.767	8.804	VV	922	15999	0.19%	0.006%
155	8.821	8.804	8.826	VV	769	8299	0.10%	0.003%
156	8.834	8.826	8.846	VV	766	7856	0.09%	0.003%
157	8.863	8.846	8.875	VV	2240	23830	0.28%	0.009%
158	8.891	8.875	8.921	VV	2271	42140	0.50%	0.016%
159	8.969	8.921	8.981	VV	9565	140474	1.68%	0.054%
160	8.988	8.981	9.014	VV	5795	56104	0.67%	0.022%
161	9.038	9.014	9.042	VV	1012	10757	0.13%	0.004%
162	9.056	9.042	9.072	VV	1447	19098	0.23%	0.007%
163	9.083	9.072	9.092	VV	608	6328	0.08%	0.002%
164	9.143	9.092	9.163	VV	2789	50318	0.60%	0.019%
165	9.183	9.163	9.194	VV	1486	19730	0.24%	0.008%
166	9.229	9.194	9.249	VV	2730	58878	0.70%	0.023%
167	9.266	9.249	9.292	VV	3678	55755	0.67%	0.021%
168	9.310	9.292	9.318	VV	2030	21824	0.26%	0.008%
169	9.330	9.318	9.369	VV	2691	38593	0.46%	0.015%
170	9.410	9.369	9.419	VV	2851	35511	0.42%	0.014%
171	9.435	9.419	9.454	VV	5614	72530	0.87%	0.028%
172	9.461	9.454	9.486	VV	1989	24164	0.29%	0.009%
173	9.504	9.486	9.541	VV	2847	39391	0.47%	0.015%
174	9.559	9.541	9.576	VV	1576	19885	0.24%	0.008%
175	9.590	9.576	9.597	VV	939	10684	0.13%	0.004%
176	9.599	9.597	9.607	VV	931	4960	0.06%	0.002%
177	9.646	9.607	9.666	VV	5825	86641	1.04%	0.033%
178	9.695	9.666	9.722	VV	1742	33509	0.40%	0.013%
179	9.741	9.722	9.762	PV	5138	59764	0.71%	0.023%
180	9.779	9.762	9.824	VV	6357	91517	1.09%	0.035%
181	9.833	9.824	9.838	VV	423	2901	0.03%	0.001%
182	9.861	9.838	9.874	VV	1670	26002	0.31%	0.010%
183	9.875	9.874	9.905	VV	1555	18252	0.22%	0.007%
184	9.924	9.905	9.951	VV	3470	51058	0.61%	0.020%
185	9.990	9.951	10.009	VV	1363	30311	0.36%	0.012%
186	10.060	10.009	10.089	VV	41506	489804	5.85%	0.188%
187	10.106	10.089	10.162	VV	5192	135634	1.62%	0.052%
188	10.194	10.162	10.256	VV	207570	2479665	29.64%	0.951%
189	10.273	10.256	10.329	VV	3705	79634	0.95%	0.031%
190	10.355	10.329	10.404	VV	2062	40205	0.48%	0.015%
191	10.417	10.404	10.428	VV	491	5497	0.07%	0.002%
192	10.456	10.428	10.479	VV	652	11822	0.14%	0.005%
193	10.503	10.479	10.516	PV	1822	25536	0.31%	0.010%
194	10.531	10.516	10.549	VV	3325	40053	0.48%	0.015%

Manual IntegrationsAPPROVED

Reviewed By :Rahul Chavli 10/31/2025
Supervised By :Yogesh Patel 10/31/2025

					rters			
195	10.557	10.549	10.562	VV	764	5450	0.07%	0.002%
196	10.585	10.562	10.602	VV	927	15777		
197	10.624	10.602	10.651	VV	2474	52167		
198	10.666	10.651	10.697	VV	2335	46327		
199	10.704	10.697	10.724	VV	1098	11559		
200	10.753	10.724	10.766	VV	1900	24710		
201	10.782	10.766	10.792	VV	2186	26874	0.32%	0.010%
202	10.809	10.792	10.824	VV	11455	139144	1.66%	0.053%
203	10.837	10.824	10.871	VV	11108	157802	1.89%	0.060%
204	10.889	10.871	10.912	VV	5668	71797	0.86%	0.028%
205	10.918	10.912	10.922	VV	916	5629	0.07%	0.002%
206	10.957	10.922	10.971	VV	7247	101815	1.22%	0.039%
207	10.989	10.971	11.035	VV	6657	128671	1.54%	0.049%
208	11.053	11.035	11.071	VV	2166	31143	0.37%	0.012%
209	11.086	11.071	11.102	VV	1870	20859	0.25%	0.008%
210	11.115	11.102	11.136	VV	909	11092	0.13%	0.004%
211	11.160	11.136	11.163	VV	7343	63071	0.75%	0.024%
212	11.187	11.163	11.208	VV	153440	1754903	20.98%	0.673%
213	11.212	11.208	11.239	VV	19573	204604	2.45%	0.078%
214	11.262	11.239	11.286	VV	26959	331765	3.97%	0.127%
215	11.297	11.286	11.334	VV	3368	67850	0.81%	0.026%
216	11.342	11.334	11.349	VV	1304	10736	0.13%	0.004%
217	11.371	11.349	11.381	VV	1684	25980	0.31%	0.010%
218	11.392	11.381	11.421	VV	1410	19140	0.23%	0.007%
219	11.441	11.421	11.460	PV	3185	38799	0.46%	0.015%
220	11.480	11.460	11.527	VV	13405	174879	2.09%	0.067%
221	11.547	11.527	11.564	VV	532	6849	0.08%	0.003%
222	11.641	11.564	11.692	VV	204432	2544681	30.42%	0.976%
223	11.713	11.692	11.748	VV	12824	221291	2.65%	0.085%
224	11.784	11.748	11.812	VV	4038	96739	1.16%	0.037%
225	11.836	11.812	11.861	VV	10294	127061	1.52%	0.049%
226	11.887	11.861	11.932	VV	32775	485208	5.80%	0.186%
227	11.953	11.932	11.971	VV	3739	51743	0.62%	0.020%
228	11.992	11.971	12.007	VV	16451	186984	2.23%	0.072%
229	12.023	12.007	12.073	VV	22319	396667	4.74%	0.152%
230	12.106	12.073	12.125	VV	19186	288012	3.44%	0.110%
231	12.142	12.125	12.152	VV	12654	138280	1.65%	0.053%
232	12.169	12.152	12.210	VV	23535	333701	3.99%	0.128%
233	12.222	12.210	12.234	VV	882	9462	0.11%	0.004%
234	12.256	12.234	12.278	VV	2887	40072	0.48%	0.015%
235	12.327	12.278	12.335	PV	5948	94629	1.13%	0.036%
236	12.354	12.335	12.385	VV	22337	335275	4.01%	0.129%
237	12.410	12.385	12.444	VV	14142	264528	3.16%	0.101%
238	12.467	12.444	12.512	VV	22862	325618	3.89%	0.125%
239	12.528	12.512	12.536	VV	1648	19857	0.24%	0.008%
240	12.571	12.536	12.627	VV	141741	1945894	23.26%	0.746%
241	12.643	12.627	12.654	VV	2716	33803	0.40%	0.013%
242	12.668	12.654	12.686	VV	3061	45683	0.55%	0.018%
243	12.698	12.686	12.703	VV	2382	21331	0.25%	0.008%
244	12.715	12.703	12.729	VV	2710	36958	0.44%	0.014%
245	12.737	12.729	12.756	VV	2392	23052	0.28%	0.009%
246	12.784	12.756	12.792	PV	4215	52200	0.62%	0.020%

Instrument :

FID_F

ClientSampleId :

WASTEMS

Manual IntegrationsAPPROVED

Reviewed By :Rahul Chavli 10/31/2025

Supervised By :Yogesh Patel 10/31/2025

Parameters							Instrument : FID_F ClientSampleId : WASTEMS	
247	12.805	12.792	12.825	VV	7217	94021	1.12%	0.036%
248	12.848	12.825	12.870	VV	15765	216111		
249	12.893	12.870	12.915	VV	13294	207070		
250	12.954	12.915	12.983	VV	200150	2439500	29	
251	13.013	12.983	13.061	VV	264511	3170204	37	
252	13.082	13.061	13.097	VV	2683	43699	0	
253	13.143	13.097	13.157	VV	18756	292271	3.49%	0.112%
254	13.175	13.157	13.211	VV	43875	685362	8.19%	0.263%
255	13.225	13.211	13.244	VV	6579	97052	1.16%	0.037%
256	13.249	13.244	13.268	VV	3180	29634	0.35%	0.011%
257	13.312	13.268	13.337	VV	204602	2418696	28.91%	0.927%
258	13.366	13.337	13.385	VV	36592	494690	5.91%	0.190%
259	13.399	13.385	13.427	VV	20965	240912	2.88%	0.092%
260	13.457	13.427	13.467	PV	1933	20346	0.24%	0.008%
261	13.501	13.467	13.536	VV	19187	357784	4.28%	0.137%
262	13.581	13.536	13.602	VV	30446	533635	6.38%	0.205%
263	13.616	13.602	13.621	VV	13974	141200	1.69%	0.054%
264	13.635	13.621	13.651	VV	22482	305163	3.65%	0.117%
265	13.662	13.651	13.684	VV	16518	215798	2.58%	0.083%
266	13.709	13.684	13.746	VV	7694	197099	2.36%	0.076%
267	13.771	13.746	13.780	VV	18529	242664	2.90%	0.093%
268	13.799	13.780	13.848	VV	51732	738696	8.83%	0.283%
269	13.901	13.848	13.938	VV	26610	465364	5.56%	0.178%
270	13.969	13.938	13.985	VV	2764	38832	0.46%	0.015%
271	14.013	13.985	14.031	VV	15825	245765	2.94%	0.094%
272	14.049	14.031	14.071	VV	18087	248474	2.97%	0.095%
273	14.091	14.071	14.121	VV	8737	149713	1.79%	0.057%
274	14.157	14.121	14.198	VV	186628	2527752	30.21%	0.969%
275	14.220	14.198	14.241	VV	13592	193165	2.31%	0.074%
276	14.253	14.241	14.261	VV	2195	22631	0.27%	0.009%
277	14.298	14.261	14.320	VV	8949	183964	2.20%	0.071%
278	14.336	14.320	14.342	VV	3152	34072	0.41%	0.013%
279	14.348	14.342	14.350	VV	2641	11895	0.14%	0.005%
280	14.399	14.350	14.420	VV	11225	291126	3.48%	0.112%
281	14.438	14.420	14.459	VV	9439	118430	1.42%	0.045%
282	14.485	14.459	14.507	PV	5605	90878	1.09%	0.035%
283	14.542	14.507	14.565	VV	31391	447340	5.35%	0.171%
284	14.586	14.565	14.610	VV	29457	444389	5.31%	0.170%
285	14.639	14.610	14.668	VV	28498	603381	7.21%	0.231%
286	14.672	14.668	14.693	VV	8467	87194	1.04%	0.033%
287	14.721	14.693	14.737	VV	22235	341336	4.08%	0.131%
288	14.745	14.737	14.772	VV	11843	161449	1.93%	0.062%
289	14.819	14.772	14.860	VV	33702	975226	11.66%	0.374%
290	14.881	14.860	14.908	VV	33745	503393	6.02%	0.193%
291	14.945	14.908	14.988	VV	91346	1380488	16.50%	0.529%
292	15.010	14.988	15.026	VV	10427	177027	2.12%	0.068%
293	15.058	15.026	15.085	VV	75848	1229719	14.70%	0.471%
294	15.093	15.085	15.124	VV	11225	160413	1.92%	0.061%
295	15.152	15.124	15.166	VV	15445	223162	2.67%	0.086%
296	15.196	15.166	15.217	VV	122428	1680911	20.09%	0.644%
297	15.239	15.217	15.248	VV	116253	1392696	16.65%	0.534%
298	15.263	15.248	15.294	VV	176112	2290652	27.38%	0.878%
299	15.308	15.294	15.325	VV	10448	143378	1.71%	0.055%

Manual IntegrationsAPPROVED

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300	15.358	15.325	15.413	VV	25402	518802	6.20%	0.199%
301	15.446	15.413	15.465	VV	10509	195249		
302	15.482	15.465	15.487	VV	6465	73123		
303	15.505	15.487	15.524	VV	13326	202633		
304	15.535	15.524	15.566	VV	8599	151340		
305	15.582	15.566	15.609	VV	5364	112958		
306	15.642	15.609	15.672	VV	80902	1163380	13.91%	0.446%
307	15.684	15.672	15.706	VV	7230	98094	1.17%	0.038%
308	15.741	15.706	15.757	VV	3075	66854	0.80%	0.026%
309	15.785	15.757	15.796	VV	18962	247342	2.96%	0.095%
310	15.808	15.796	15.827	VV	18963	301446	3.60%	0.116%
311	15.833	15.827	15.847	VV	12690	145221	1.74%	0.056%
312	15.870	15.847	15.893	VV	23539	383905	4.59%	0.147%
313	15.910	15.893	15.939	VV	10569	150715	1.80%	0.058%
314	15.955	15.939	15.965	VV	4504	46050	0.55%	0.018%
315	16.005	15.965	16.040	VV	88033	1495818	17.88%	0.573%
316	16.052	16.040	16.087	VV	18162	319775	3.82%	0.123%
317	16.111	16.087	16.131	VV	5724	105037	1.26%	0.040%
318	16.160	16.131	16.179	VV	8243	149900	1.79%	0.057%
319	16.196	16.179	16.220	VV	6270	86143	1.03%	0.033%
320	16.244	16.220	16.259	VV	7762	118408	1.42%	0.045%
321	16.291	16.259	16.327	VV	153523	2163897	25.86%	0.830%
322	16.351	16.327	16.390	VV	11672	171558	2.05%	0.066%
323	16.412	16.390	16.444	VV	4750	79998	0.96%	0.031%
324	16.500	16.444	16.529	PV	11990	295498	3.53%	0.113%
325	16.547	16.529	16.565	VV	7094	108126	1.29%	0.041%
326	16.584	16.565	16.598	VV	6922	118172	1.41%	0.045%
327	16.602	16.598	16.627	VV	5827	86178	1.03%	0.033%
328	16.660	16.627	16.718	VV	123787	2054698	24.56%	0.788%
329	16.764	16.718	16.785	VV	136944	2296682	27.45%	0.880%
330	16.790	16.785	16.815	VV	58934	581658	6.95%	0.223%
331	16.849	16.815	16.871	VV	11250	305187	3.65%	0.117%
332	16.893	16.871	16.914	VV	26217	403963	4.83%	0.155%
333	16.932	16.914	16.961	VV	9576	231539	2.77%	0.089%
334	16.991	16.961	17.035	VV	78554	1428196	17.07%	0.547%
335	17.085	17.035	17.113	VV	83978	1539174	18.40%	0.590%
336	17.144	17.113	17.187	VV	115177	1764434	21.09%	0.676%
337	17.244	17.187	17.275	VV	181936	2955580	35.33%	1.133%
338	17.294	17.275	17.304	VV	23135	328373	3.92%	0.126%
339	17.321	17.304	17.342	VV	36683	596204	7.13%	0.229%
340	17.385	17.342	17.420	VV	16023	659906	7.89%	0.253%
341	17.449	17.420	17.453	VV	16424	291555	3.48%	0.112%
342	17.458	17.453	17.466	VV	16853	121772	1.46%	0.047%
343	17.476	17.466	17.488	VV	17502	215959	2.58%	0.083%
344	17.519	17.488	17.545	VV	25707	722432	8.64%	0.277%
345	17.554	17.545	17.573	VV	17008	264445	3.16%	0.101%
346	17.608	17.573	17.656	VV	124675	2451008	29.30%	0.940%
347	17.697	17.656	17.722	VV	130109	2327880	27.82%	0.892%
348	17.733	17.722	17.749	VV	22987	331545	3.96%	0.127%
349	17.765	17.749	17.778	VV	22396	356497	4.26%	0.137%
350	17.807	17.778	17.833	VV	25084	729386	8.72%	0.280%
351	17.866	17.833	17.887	VV	27420	707995	8.46%	0.271%

Instrument :

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Manual IntegrationsAPPROVED

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					rters			
352	17.912	17.887	17.942	VV	29928	783196	9.36%	0.300%
353	17.965	17.942	17.980	VV	25550	525796		
354	17.985	17.980	18.007	VV	22747	341625		
355	18.054	18.007	18.082	VV	34525	1211509	14.38%	0.782%
356	18.137	18.082	18.163	VV	187760	3839500	45.78%	1.468%
357	18.178	18.163	18.193	VV	53040	827706		
358	18.225	18.193	18.265	VV	71219	2040074	24.38%	0.782%
359	18.295	18.265	18.336	VV	38405	1494436	17.86%	0.573%
360	18.363	18.336	18.393	VV	63546	1502768	17.96%	0.576%
361	18.430	18.393	18.445	VV	50945	1217876	14.56%	0.467%
362	18.460	18.445	18.470	VV	52692	733341	8.77%	0.281%
363	18.494	18.470	18.508	VV	137060	2217118	26.50%	0.850%
364	18.528	18.508	18.546	VV	219656	3830415	45.78%	1.468%
365	18.562	18.546	18.594	VV	177059	3171716	37.91%	1.216%
366	18.608	18.594	18.626	VV	39795	727434	8.69%	0.279%
367	18.658	18.626	18.674	VV	69374	1491333	17.83%	0.572%
368	18.691	18.674	18.746	VV	58634	1910420	22.83%	0.732%
369	18.778	18.746	18.807	VV	99888	2108316	25.20%	0.808%
370	18.856	18.807	18.891	VV	89318	2918471	34.88%	1.119%
371	18.912	18.891	18.931	VV	65861	1333366	15.94%	0.511%
372	18.974	18.931	19.032	VV	226216	5777950	69.06%	2.215%
373	19.078	19.032	19.119	VV	132273	3767521	45.03%	1.444%
374	19.129	19.119	19.157	VV	49702	1071176	12.80%	0.411%
375	19.178	19.157	19.206	VV	47865	1309325	15.65%	0.502%
376	19.251	19.206	19.266	VV	60246	1826760	21.83%	0.700%
377	19.329	19.266	19.358	VV	368592	8366204	100.00%	3.207%
378	19.374	19.358	19.420	VV	149249	3848752	46.00%	1.475%
379	19.452	19.420	19.480	VV	97813	2842090	33.97%	1.090%
380	19.502	19.480	19.549	VV	120174	3364981	40.22%	1.290%
381	19.610	19.549	19.646	VV	132543	4617535	55.19%	1.770%
382	19.667	19.646	19.704	VV	87496	2411467	28.82%	0.924%
383	19.723	19.704	19.730	VV	62038	919580	10.99%	0.353%
384	19.763	19.730	19.799	VV	248098	5143713	61.48%	1.972%
385	19.824	19.799	19.851	VV	145938	2968077	35.48%	1.138%
386	19.872	19.851	19.906	VV	98249	2502130	29.91%	0.959%
387	19.944	19.906	19.968	VV	86663	2561873	30.62%	0.982%
388	19.972	19.968	19.990	VV	62514	792772	9.48%	0.304%
389	20.020	19.990	20.054	VV	90532	2925045	34.96%	1.121%
390	20.063	20.054	20.081	VV	69583	1063424	12.71%	0.408%
391	20.106	20.081	20.155	VV	136617	4281057	51.17%	1.641%
392	20.169	20.155	20.196	VV	84588	1892035	22.62%	0.725%
393	20.207	20.196	20.218	VV	68417	897126	10.72%	0.344%
394	20.235	20.218	20.242	VV	73566	1002650	11.98%	0.384%
395	20.251	20.242	20.289	VV	74106	2025603	24.21%	0.777%
396	20.326	20.289	20.352	VV	94324	3042271	36.36%	1.166%
397	20.405	20.352	20.411	VV	87091	2784344	33.28%	1.067%
398	20.432	20.411	20.450	VV	92687	2064122	24.67%	0.791%
399	20.461	20.450	20.474	VV	82120	1145216	13.69%	0.439%
400	20.506	20.474	20.529	VV	245886	4973016	59.44%	1.906%
401	20.543	20.529	20.578	VV	137553	2893043	34.58%	1.109%
402	20.582	20.578	20.586	VV	61509	310902	3.72%	0.119%
403	20.623	20.586	20.649	VV	80768	2617051	31.28%	1.003%
404	20.672	20.649	20.696	VV	69835	1880473	22.48%	0.721%

Instrument :

FID_F

ClientSampleId :

WASTEMS

Manual IntegrationsAPPROVED

Reviewed By :Rahul Chavli 10/31/2025

Supervised By :Yogesh Patel 10/31/2025

							Instrument : FID_F	
							ClientSampleId : WASTEMS	
rteres							3.29% 0.106%	
405	20.699	20.696	20.703	VV	65535	275324	Manual IntegrationsAPPROVED Reviewed By :Rahul Chavli 10/31/2025 Supervised By :Yogesh Patel 10/31/2025	
406	20.710	20.703	20.722	VV	66717	738114		
407	20.745	20.722	20.805	VV	68556	3181422		
408	20.854	20.805	20.888	VV	71156	3140226		
409	20.912	20.888	20.954	VV	63209	2274521		
410	20.961	20.954	20.966	VV	51814	353522		
411	20.970	20.966	20.974	VV	50925	245459	2.93%	0.094%
412	20.981	20.974	20.989	VV	52114	472194	5.64%	0.181%
413	20.997	20.989	21.011	VV	52772	661826	7.91%	0.254%
414	21.016	21.011	21.022	VV	50154	344342	4.12%	0.132%
415	21.053	21.022	21.080	VV	68064	2022236	24.17%	0.775%
416	21.092	21.080	21.125	VV	52826	1329773	15.89%	0.510%
417	21.137	21.125	21.145	VV	47645	563795	6.74%	0.216%
418	21.196	21.145	21.227	VV	53588	2371100	28.34%	0.909%
419	21.266	21.227	21.305	VV	185142	4643185	55.50%	1.780%
420	21.327	21.305	21.357	VV	56075	1524861	18.23%	0.585%
421	21.362	21.357	21.369	VV	41808	273914	3.27%	0.105%
422	21.378	21.369	21.398	VV	43226	737960	8.82%	0.283%
423	21.414	21.398	21.450	VV	41551	1183525	14.15%	0.454%
424	21.482	21.450	21.487	VV	35014	772927	9.24%	0.296%
425	21.502	21.487	21.509	VV	34689	439200	5.25%	0.168%
426	21.543	21.509	21.568	VV	38205	1261340	15.08%	0.484%
427	21.576	21.568	21.600	VV	36925	663822	7.93%	0.254%
428	21.613	21.600	21.635	VV	34059	673446	8.05%	0.258%
429	21.663	21.635	21.695	VV	34885	1104262	13.20%	0.423%
430	21.764	21.695	21.817	VV	39037	2318747	27.72%	0.889%
431	21.824	21.817	21.829	VV	27798	201125	2.40%	0.077%
432	21.835	21.829	21.863	VV	28942	548670	6.56%	0.210%
433	21.870	21.863	21.877	VV	26295	225880	2.70%	0.087%
434	21.885	21.877	21.892	VV	25927	213234	2.55%	0.082%
435	21.893	21.892	21.915	VV	24833	320064	3.83%	0.123%
436	21.936	21.915	21.945	VV	26232	427504	5.11%	0.164%
437	21.953	21.945	21.966	VV	24360	298790	3.57%	0.115%
438	21.977	21.966	21.982	VV	24445	238327	2.85%	0.091%
439	21.986	21.982	21.992	VV	24113	141297	1.69%	0.054%
440	22.027	21.992	22.053	VV	30512	948900	11.34%	0.364%
441	22.073	22.053	22.114	VV	25319	744176	8.90%	0.285%
442	22.177	22.114	22.185	VV	71455	1813894	21.68%	0.695%
443	22.216	22.185	22.284	VV	122125	3679070	43.98%	1.410%
444	22.290	22.284	22.298	VV	14193	111400	1.33%	0.043%
445	22.305	22.298	22.343	VV	12635	293488	3.51%	0.113%
446	22.348	22.343	22.352	VV	7139	38845	0.46%	0.015%
447	22.355	22.352	22.361	VV	7560	35733	0.43%	0.014%
448	22.383	22.361	22.387	VV	7956	115926	1.39%	0.044%
449	22.447	22.387	22.452	VV	24311	624947	7.47%	0.240%
450	22.461	22.452	22.498	VV	24922	603153	7.21%	0.231%
451	22.502	22.498	22.515	VV	17797	175723	2.10%	0.067%
452	22.526	22.515	22.547	VV	17913	306005	3.66%	0.117%
453	22.559	22.547	22.564	VV	16208	155483	1.86%	0.060%
Sum of corrected areas:							260858038	

Manual IntegrationsAPPROVED

Reviewed By :Rahul Chavli 10/31/2025
Supervised By :Yogesh Patel 10/31/2025

Report of Analysis

Client:	AECOM		Date Collected:	10/27/25
Project:	AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206		Date Received:	10/27/25
Client Sample ID:	WASTEMSD		SDG No.:	Q3434
Lab Sample ID:	Q3474-01MSD		Matrix:	SOIL
Analytical Method:	8015D TPH		% Solid:	87.2
Sample Wt/Vol:	30.06 g	Final Vol:	1 mL	Test:
Prep Method:	SW3541	Prep Date	10/29/25	TPH GC

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS									
PHC	Petroleum Hydrocarbons	92000	E	1	439	3240	ug/kg	10/30/25 14:50	PB170324
SURROGATES									
16416-32-3	TETRACOSANE-d50	11.3			37 - 130	56%	SPK: 20		

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF103025\
 Data File : FF016639.D
 Signal(s) : FID2B.ch
 Acq On : 30 Oct 2025 14:50
 Operator : YP\AJ
 Sample : Q3474-01MSD
 Misc :
 ALS Vial : 36 Sample Multiplier: 1

Instrument :
 FID_F
 ClientSampleId :
 WASTEMSD

Manual Integrations
 APPROVED

Reviewed By :Rahul Chavli 10/31/2025
 Supervised By :Yogesh Patel 10/31/2025

Integration File: autoint1.e
 Quant Time: Oct 31 02:22:14 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
 Quant Title :
 QLast Update : Wed Oct 29 12:48:52 2025
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1uL
 Signal Phase : Rxi-1ms
 Signal Info : 20mx0.18mmx0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.060	1178413	11.279 ug/ml
Target Compounds			
1) N-OCTANE	2.058	1716913	15.468 ug/ml
2) N-DECANE	4.576	2086963	18.861 ug/ml
3) N-DODECANE	6.753	2150957	19.363 ug/ml
4) N-TETRADECANE	8.586	2170718	19.431 ug/ml
5) N-HEXADECANE	10.196	2371313	21.105 ug/ml
6) N-OCTADECANE	11.642	2513495	21.478 ug/ml
7) N-EICOSANE	12.956	2408331	19.723 ug/ml
8) N-DOCOSANE	14.158	2496707	20.945 ug/ml
10) N-TETRACOSANE	15.264	2231611	18.834 ug/ml
11) N-HEXACOSANE	16.291	2132184	18.560 ug/ml
12) N-OCTACOSANE	17.246	2339955	20.534 ug/ml
13) N-TRIACONTANE	18.139	2809210	25.002 ug/ml
14) N-DOTRIACONTANE	18.975	3401691	31.733 ug/mlm
15) N-TETRATRIACONTANE	19.765	2788638	28.380 ug/ml
16) N-HEXATRIACONTANE	20.511	2588666	30.274 ug/ml
17) N-OCTATRIACONTANE	21.270	2521406	32.851 ug/ml
18) N-TETRACONTANE	22.218	2910513	42.646 ug/mlm

(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF103025\
Data File : FF016639.D
Signal(s) : FID2B.ch
Acq On : 30 Oct 2025 14:50
Operator : YP\AJ
Sample : Q3474-01MSD
Misc :
ALS Vial : 36 Sample Multiplier: 1

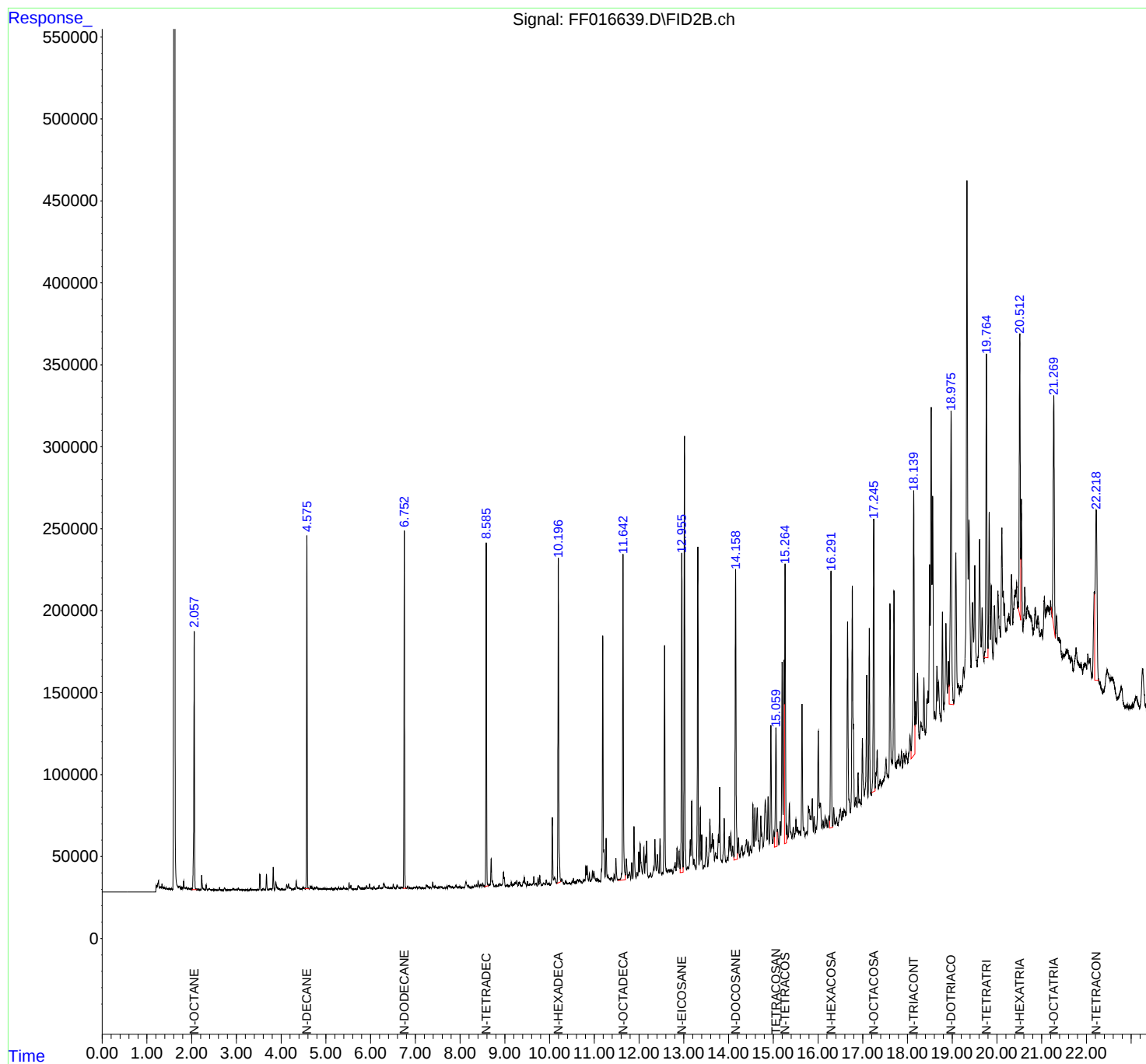
Instrument :
FID_F
ClientSampleId :
WASTEMSD

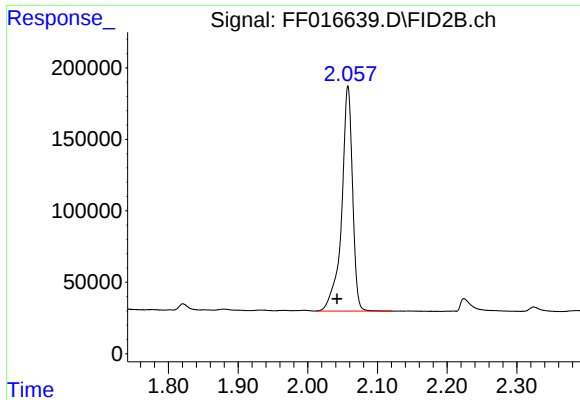
Manual Integrations
APPROVED

Reviewed By :Rahul Chavli 10/31/2025
Supervised By :Yogesh Patel 10/31/2025

Integration File: autoint1.e
Quant Time: Oct 31 02:22:14 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
Quant Title :
QLast Update : Wed Oct 29 12:48:52 2025
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um





#1 N-OCTANE

R.T.: 2.058 min
Delta R.T.: 0.016 min
Response: 1716913
Conc: 15.47 ug/ml

Instrument :

FID_F

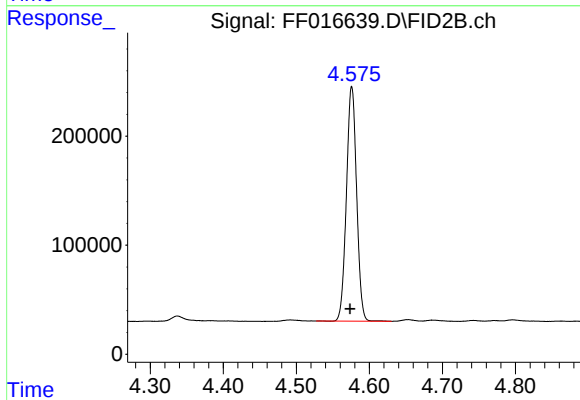
ClientSampleId :

WASTEMSD

Manual Integrations

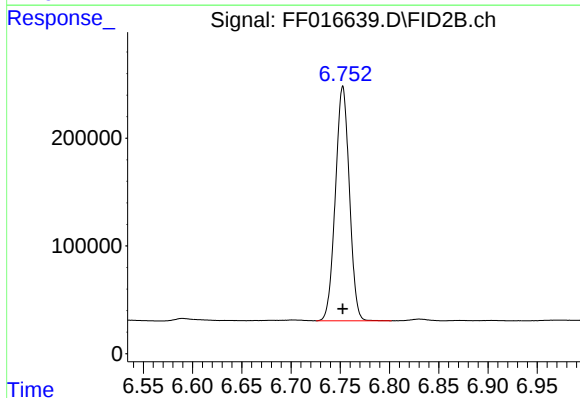
APPROVED

Reviewed By :Rahul Chavli 10/31/2025
Supervised By :Yogesh Patel 10/31/2025



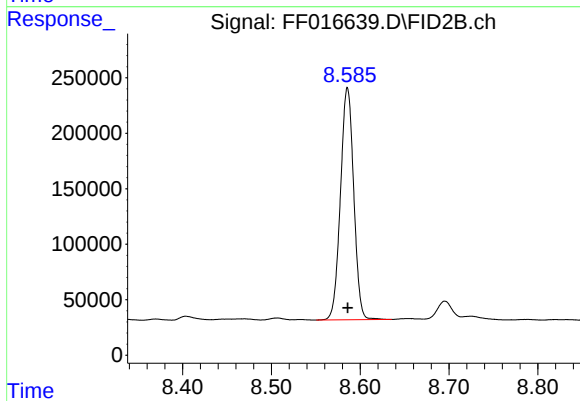
#2 N-DECANE

R.T.: 4.576 min
Delta R.T.: 0.002 min
Response: 2086963
Conc: 18.86 ug/ml



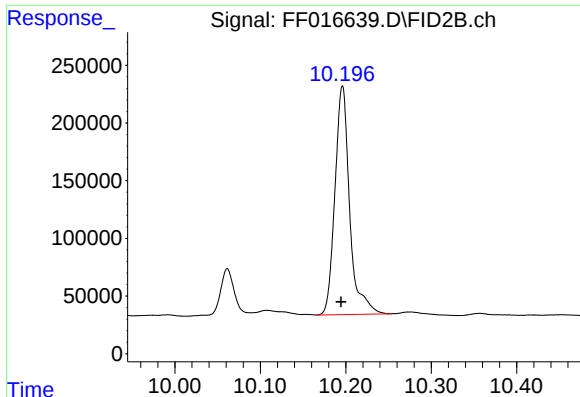
#3 N-DODECANE

R.T.: 6.753 min
Delta R.T.: 0.000 min
Response: 2150957
Conc: 19.36 ug/ml



#4 N-TETRADECANE

R.T.: 8.586 min
Delta R.T.: 0.000 min
Response: 2170718
Conc: 19.43 ug/ml



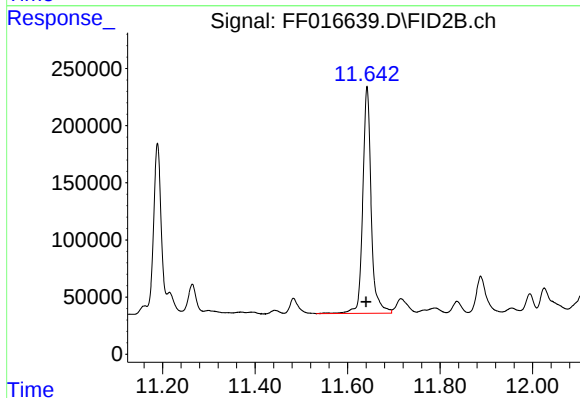
#5 N-HEXADECANE

R.T.: 10.196 min
Delta R.T.: 0.002 min
Response: 2371313
Conc: 21.11 ug/ml

Instrument :
FID_F
ClientSampleId :
WASTEMSD

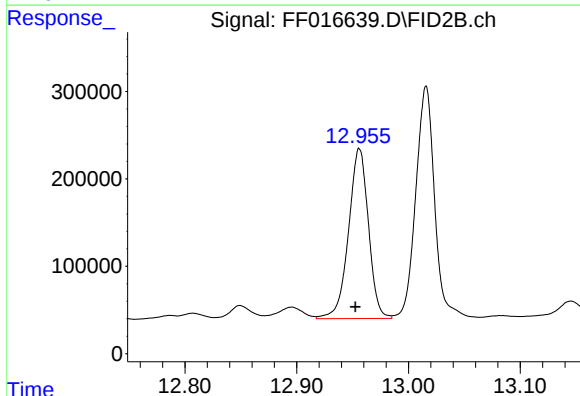
Manual Integrations
APPROVED

Reviewed By :Rahul Chavli 10/31/2025
Supervised By :Yogesh Patel 10/31/2025



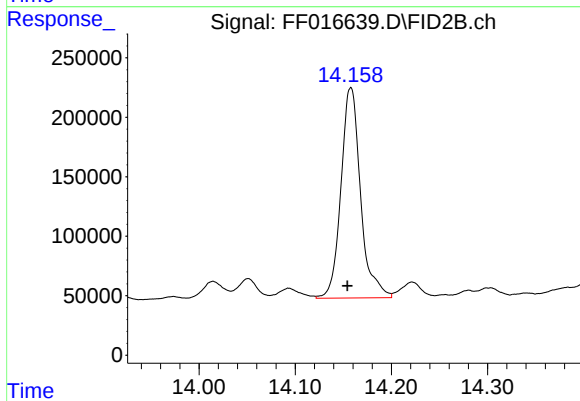
#6 N-OCTADECANE

R.T.: 11.642 min
Delta R.T.: 0.002 min
Response: 2513495
Conc: 21.48 ug/ml



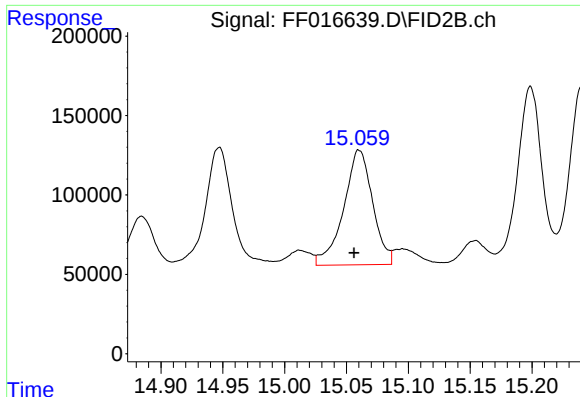
#7 N-EICOSANE

R.T.: 12.956 min
Delta R.T.: 0.003 min
Response: 2408331
Conc: 19.72 ug/ml



#8 N-DOCOSANE

R.T.: 14.158 min
Delta R.T.: 0.004 min
Response: 2496707
Conc: 20.94 ug/ml



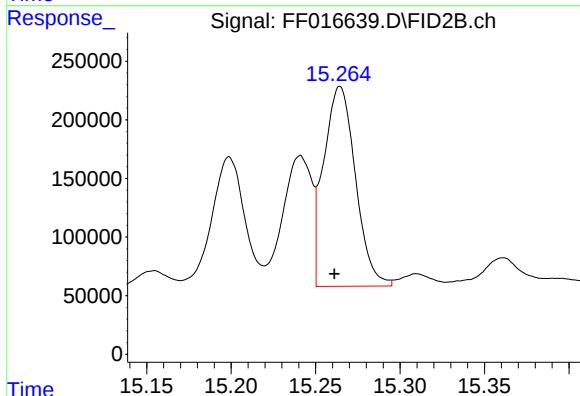
#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 15.060 min
Delta R.T.: 0.004 min
Response: 1178413
Conc: 11.28 ug/ml

Instrument :
FID_F
ClientSampleId :
WASTEMSD

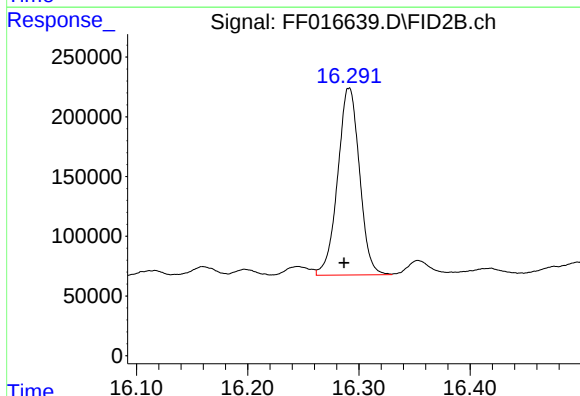
Manual Integrations
APPROVED

Reviewed By :Rahul Chavli 10/31/2025
Supervised By :Yogesh Patel 10/31/2025



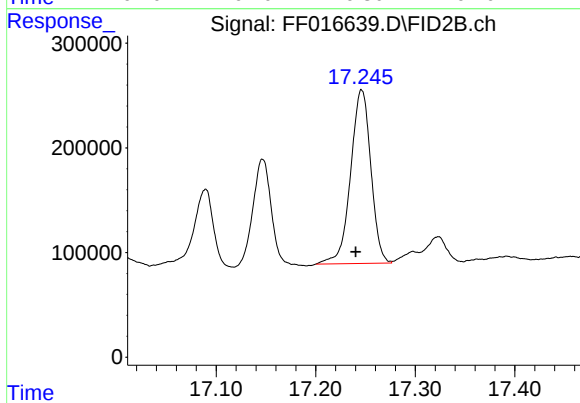
#10 N-TETRACOSANE

R.T.: 15.264 min
Delta R.T.: 0.003 min
Response: 2231611
Conc: 18.83 ug/ml



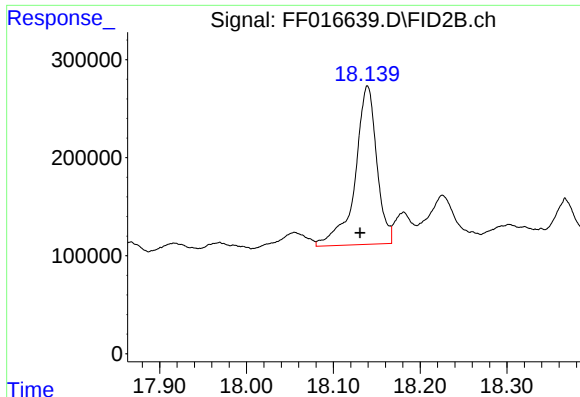
#11 N-HEXACOSANE

R.T.: 16.291 min
Delta R.T.: 0.005 min
Response: 2132184
Conc: 18.56 ug/ml



#12 N-OCTACOSANE

R.T.: 17.246 min
Delta R.T.: 0.006 min
Response: 2339955
Conc: 20.53 ug/ml



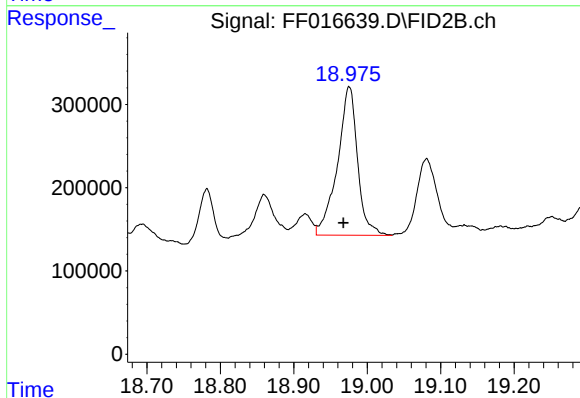
#13 N-TRIACONTANE

R.T.: 18.139 min
Delta R.T.: 0.009 min
Response: 2809210
Conc: 25.00 ug/ml

Instrument :
FID_F
ClientSampleId :
WASTEMSD

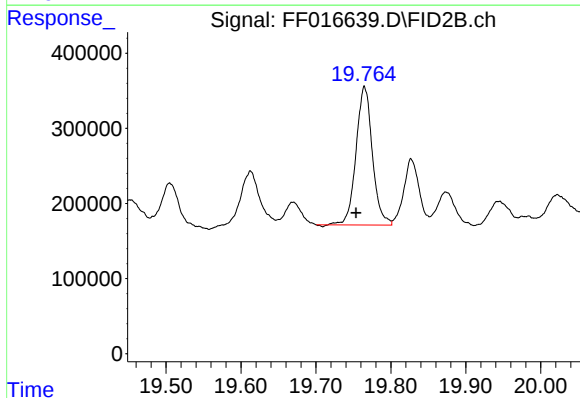
Manual Integrations
APPROVED

Reviewed By :Rahul Chavli 10/31/2025
Supervised By :Yogesh Patel 10/31/2025



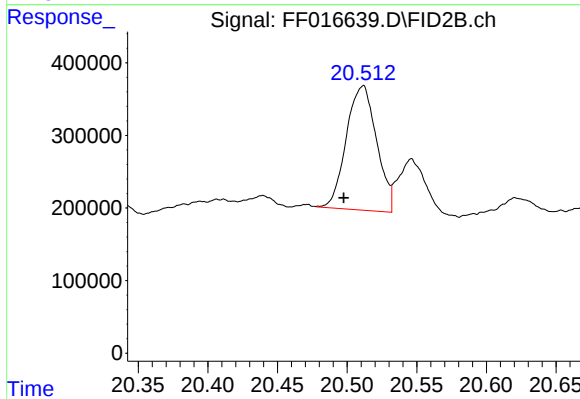
#14 N-DOTRIACONTANE

R.T.: 18.975 min
Delta R.T.: 0.007 min
Response: 3401691
Conc: 31.73 ug/ml m



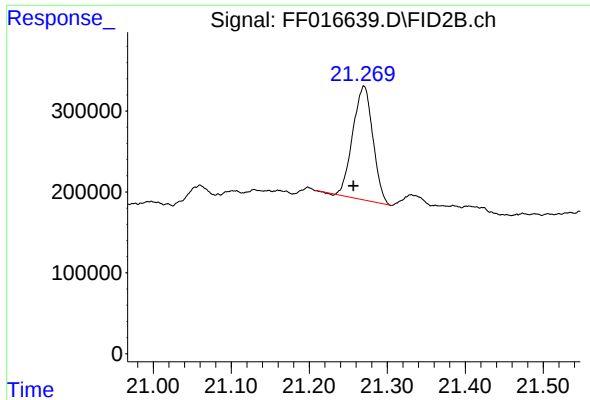
#15 N-TETRATRIACONTANE

R.T.: 19.765 min
Delta R.T.: 0.011 min
Response: 2788638
Conc: 28.38 ug/ml



#16 N-HEXATRIACONTANE

R.T.: 20.511 min
Delta R.T.: 0.014 min
Response: 2588666
Conc: 30.27 ug/ml



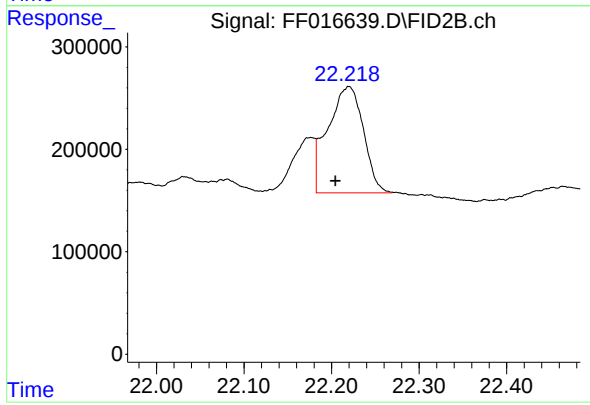
#17 N-OCTATRIACONTANE

R.T.: 21.270 min
Delta R.T.: 0.014 min
Response: 2521406
Conc: 32.85 ug/ml

Instrument :
FID_F
ClientSampleId :
WASTEMSD

Manual Integrations
APPROVED

Reviewed By :Rahul Chavli 10/31/2025
Supervised By :Yogesh Patel 10/31/2025



#18 N-TETRACONTANE

R.T.: 22.218 min
Delta R.T.: 0.014 min
Response: 2910513
Conc: 42.65 ug/ml m

Instrument :

FID_F

ClientSampleId :

WASTEMSD

Area Percent Report

Manual IntegrationsAPPROVED

Reviewed By :Rahul Chavli 10/31/2025
Supervised By :Yogesh Patel 10/31/2025

rteres

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF10302
Data File : FF016639.D
Signal(s) : FID2B.ch
Acq On : 30 Oct 2025 14:50
Sample : Q3474-01MSD
Misc :
ALS Vial : 36 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF102925.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	1.932	1.906	1.950	BV	377	3342	0.04%	0.001%
2	1.965	1.950	1.980	PV	362	3672	0.05%	0.001%
3	1.995	1.980	2.010	VV	512	5530	0.07%	0.002%
4	2.058	2.010	2.126	PV	157643	1722440	21.14%	0.667%
5	2.130	2.126	2.138	VV	186	1250	0.02%	0.000%
6	2.145	2.138	2.182	VV	248	3474	0.04%	0.001%
7	2.224	2.182	2.305	PV	9011	111773	1.37%	0.043%
8	2.324	2.305	2.363	VV	3195	34458	0.42%	0.013%
9	2.399	2.363	2.446	VV	920	18599	0.23%	0.007%
10	2.463	2.446	2.495	PV	292	5311	0.07%	0.002%
11	2.500	2.495	2.523	VV	260	2747	0.03%	0.001%
12	2.534	2.523	2.557	VV	227	2658	0.03%	0.001%
13	2.575	2.557	2.591	VV	171	1562	0.02%	0.001%
14	2.623	2.591	2.643	VV	1684	18163	0.22%	0.007%
15	2.645	2.643	2.710	VV	242	2951	0.04%	0.001%
16	2.733	2.710	2.780	PV	1669	28132	0.35%	0.011%
17	2.798	2.780	2.819	VV	406	6430	0.08%	0.002%
18	2.824	2.819	2.846	VV	265	3567	0.04%	0.001%
19	2.867	2.846	2.872	VV	298	3541	0.04%	0.001%
20	2.889	2.872	2.904	VV	365	5240	0.06%	0.002%
21	2.922	2.904	2.942	VV	1087	15177	0.19%	0.006%
22	2.955	2.942	2.985	VV	706	12856	0.16%	0.005%
23	2.993	2.985	2.999	VV	436	3214	0.04%	0.001%
24	3.006	2.999	3.022	VV	539	5211	0.06%	0.002%
25	3.045	3.022	3.078	VV	1417	21915	0.27%	0.008%
26	3.102	3.078	3.121	VV	515	7474	0.09%	0.003%
27	3.128	3.121	3.139	VV	234	1654	0.02%	0.001%
28	3.144	3.139	3.148	VV	134	618	0.01%	0.000%
29	3.166	3.148	3.198	VV	363	5782	0.07%	0.002%
30	3.222	3.198	3.253	VV	289	6007	0.07%	0.002%
31	3.255	3.253	3.267	VV	261	826	0.01%	0.000%
32	3.272	3.267	3.291	VV	145	1128	0.01%	0.000%
33	3.321	3.291	3.353	VV	796	12296	0.15%	0.005%
34	3.363	3.353	3.369	VV	241	1774	0.02%	0.001%
35	3.373	3.369	3.384	VV	231	1607	0.02%	0.001%
36	3.390	3.384	3.396	VV	181	1059	0.01%	0.000%

					rters			
37	3.418	3.396	3.423	VV	169	2342	0.03%	0.001%
38	3.437	3.423	3.453	VV	250	3409		
39	3.464	3.453	3.481	VV	273	3298		
40	3.483	3.481	3.502	VV	248	2203		
41	3.525	3.502	3.553	VV	9690	99272		
42	3.560	3.553	3.579	VV	195	1773		
43	3.599	3.579	3.623	VV	1149	14224	0.17%	0.006%
44	3.636	3.623	3.649	VV	460	5241	0.06%	0.002%
45	3.673	3.649	3.704	VV	9779	103543	1.27%	0.040%
46	3.708	3.704	3.723	VV	351	3252	0.04%	0.001%
47	3.731	3.723	3.736	VV	362	2291	0.03%	0.001%
48	3.761	3.736	3.790	VV	821	15874	0.19%	0.006%
49	3.824	3.790	3.856	VV	14008	155129	1.90%	0.060%
50	3.880	3.856	3.984	VV	4957	118684	1.46%	0.046%
51	4.003	3.984	4.029	VV	580	12378	0.15%	0.005%
52	4.036	4.029	4.049	VV	358	3785	0.05%	0.001%
53	4.052	4.049	4.085	VV	308	5777	0.07%	0.002%
54	4.124	4.085	4.145	VV	3227	49491	0.61%	0.019%
55	4.164	4.145	4.189	VV	3780	57297	0.70%	0.022%
56	4.198	4.189	4.243	VV	1247	27966	0.34%	0.011%
57	4.254	4.243	4.260	VV	433	4158	0.05%	0.002%
58	4.272	4.260	4.283	VV	542	6417	0.08%	0.002%
59	4.294	4.283	4.309	VV	725	9596	0.12%	0.004%
60	4.337	4.309	4.375	VV	5442	88608	1.09%	0.034%
61	4.380	4.375	4.400	VV	1137	14511	0.18%	0.006%
62	4.407	4.400	4.425	VV	951	11278	0.14%	0.004%
63	4.430	4.425	4.457	VV	581	10322	0.13%	0.004%
64	4.492	4.457	4.525	VV	1779	41885	0.51%	0.016%
65	4.531	4.525	4.548	VV	859	10628	0.13%	0.004%
66	4.576	4.548	4.631	VV	215842	2119687	26.01%	0.821%
67	4.653	4.631	4.673	VV	2013	30675	0.38%	0.012%
68	4.686	4.673	4.724	VV	1567	28407	0.35%	0.011%
69	4.743	4.724	4.758	VV	1272	17595	0.22%	0.007%
70	4.771	4.758	4.783	VV	1156	13692	0.17%	0.005%
71	4.796	4.783	4.843	VV	1804	34660	0.43%	0.013%
72	4.862	4.843	4.875	VV	677	9604	0.12%	0.004%
73	4.884	4.875	4.907	VV	561	7566	0.09%	0.003%
74	4.942	4.907	4.958	VV	744	14159	0.17%	0.005%
75	4.966	4.958	4.976	VV	696	5431	0.07%	0.002%
76	4.982	4.976	5.007	VV	530	8230	0.10%	0.003%
77	5.046	5.007	5.067	VV	458	13107	0.16%	0.005%
78	5.085	5.067	5.108	VV	495	8655	0.11%	0.003%
79	5.128	5.108	5.149	VV	1173	15260	0.19%	0.006%
80	5.157	5.149	5.179	VV	328	4122	0.05%	0.002%
81	5.213	5.179	5.266	VV	826	21304	0.26%	0.008%
82	5.284	5.266	5.306	VV	1530	19843	0.24%	0.008%
83	5.313	5.306	5.319	VV	582	4226	0.05%	0.002%
84	5.336	5.319	5.375	VV	691	15670	0.19%	0.006%
85	5.398	5.375	5.443	VV	1355	28375	0.35%	0.011%
86	5.460	5.443	5.500	VV	658	14258	0.17%	0.006%
87	5.520	5.500	5.544	VV	4095	48017	0.59%	0.019%
88	5.560	5.544	5.586	VV	2520	29599	0.36%	0.011%
89	5.593	5.586	5.612	VV	361	2864	0.04%	0.001%

Instrument :

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Manual IntegrationsAPPROVED

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90	5.649	5.612	5.693	VV	475	8765	0.11%	0.003%
91	5.720	5.693	5.744	PV	2245	38540		
92	5.754	5.744	5.774	VV	1360	17377		
93	5.786	5.774	5.802	VV	722	8735		
94	5.820	5.802	5.825	VV	675	6800		
95	5.833	5.825	5.857	VV	607	9100		
96	5.875	5.857	5.893	VV	1294	15207	0.19%	0.006%
97	5.913	5.893	5.957	VV	2171	36646	0.45%	0.014%
98	5.976	5.957	6.017	VV	3225	46041	0.57%	0.018%
99	6.031	6.017	6.053	VV	677	10180	0.12%	0.004%
100	6.075	6.053	6.112	VV	1473	23044	0.28%	0.009%
101	6.125	6.112	6.148	VV	447	7255	0.09%	0.003%
102	6.188	6.148	6.222	VV	2252	41655	0.51%	0.016%
103	6.226	6.222	6.238	VV	584	4513	0.06%	0.002%
104	6.252	6.238	6.266	VV	951	12038	0.15%	0.005%
105	6.300	6.266	6.368	VV	3166	96302	1.18%	0.037%
106	6.370	6.368	6.383	VV	740	5878	0.07%	0.002%
107	6.398	6.383	6.428	VV	1227	19286	0.24%	0.007%
108	6.437	6.428	6.452	VV	641	7302	0.09%	0.003%
109	6.466	6.452	6.482	VV	870	11248	0.14%	0.004%
110	6.506	6.482	6.526	VV	2846	37614	0.46%	0.015%
111	6.532	6.526	6.567	VV	962	14622	0.18%	0.006%
112	6.590	6.567	6.628	VV	2523	45459	0.56%	0.018%
113	6.638	6.628	6.655	VV	680	8864	0.11%	0.003%
114	6.701	6.655	6.726	VV	1051	28698	0.35%	0.011%
115	6.753	6.726	6.809	VV	218181	2166744	26.59%	0.840%
116	6.830	6.809	6.853	VV	1805	25199	0.31%	0.010%
117	6.873	6.853	6.892	VV	591	9585	0.12%	0.004%
118	6.904	6.892	6.928	VV	606	8610	0.11%	0.003%
119	6.932	6.928	6.940	VV	323	1867	0.02%	0.001%
120	6.976	6.940	7.001	VV	821	21135	0.26%	0.008%
121	7.029	7.001	7.058	VV	1097	21506	0.26%	0.008%
122	7.086	7.058	7.132	VV	1151	25422	0.31%	0.010%
123	7.154	7.132	7.181	VV	590	10180	0.12%	0.004%
124	7.188	7.181	7.218	VV	666	4434	0.05%	0.002%
125	7.245	7.218	7.264	PV	2313	30921	0.38%	0.012%
126	7.276	7.264	7.310	VV	1414	29411	0.36%	0.011%
127	7.324	7.310	7.333	VV	779	9511	0.12%	0.004%
128	7.336	7.333	7.357	VV	661	7412	0.09%	0.003%
129	7.389	7.357	7.407	VV	3837	48277	0.59%	0.019%
130	7.421	7.407	7.432	VV	1105	13899	0.17%	0.005%
131	7.443	7.432	7.467	VV	1250	19068	0.23%	0.007%
132	7.478	7.467	7.509	VV	803	14173	0.17%	0.005%
133	7.525	7.509	7.552	VV	1394	18414	0.23%	0.007%
134	7.570	7.552	7.585	VV	1407	16413	0.20%	0.006%
135	7.593	7.585	7.641	VV	569	9779	0.12%	0.004%
136	7.660	7.641	7.671	PV	269	3448	0.04%	0.001%
137	7.678	7.671	7.685	VV	199	1596	0.02%	0.001%
138	7.702	7.685	7.716	VV	1232	12267	0.15%	0.005%
139	7.738	7.716	7.757	VV	1570	28550	0.35%	0.011%
140	7.760	7.757	7.783	VV	1255	16681	0.20%	0.006%
141	7.788	7.783	7.810	VV	862	11059	0.14%	0.004%

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						Instrument : FID_F ClientSampleId : WASTEMSD		
142	7.827	7.810	7.871	VV	742	15311	0.19%	0.006%
143	7.902	7.871	7.954	VV	1665	35818		
144	7.959	7.954	7.974	VV	381	3629		
145	7.993	7.974	8.024	VV	1094	14389		
146	8.050	8.024	8.059	VV	504	6128		
147	8.066	8.059	8.082	VV	457	4053		
148	8.133	8.082	8.176	VV	3457	90655	1.11%	0.035%
149	8.190	8.176	8.223	VV	1495	22909	0.28%	0.009%
150	8.245	8.223	8.262	VV	528	6543	0.08%	0.003%
151	8.279	8.262	8.297	PV	568	7140	0.09%	0.003%
152	8.329	8.297	8.356	VV	1791	32431	0.40%	0.013%
153	8.370	8.356	8.388	VV	1642	20268	0.25%	0.008%
154	8.404	8.388	8.432	VV	4102	57412	0.70%	0.022%
155	8.469	8.432	8.488	VV	1733	45277	0.56%	0.018%
156	8.506	8.488	8.523	VV	2386	31615	0.39%	0.012%
157	8.533	8.523	8.548	VV	1055	12181	0.15%	0.005%
158	8.586	8.548	8.636	VV	209923	2211657	27.14%	0.857%
159	8.655	8.636	8.671	VV	1846	32107	0.39%	0.012%
160	8.695	8.671	8.715	VV	17475	218431	2.68%	0.085%
161	8.725	8.715	8.774	VV	3928	68456	0.84%	0.027%
162	8.789	8.774	8.808	VV	937	13916	0.17%	0.005%
163	8.820	8.808	8.828	VV	802	7914	0.10%	0.003%
164	8.833	8.828	8.848	VV	752	6715	0.08%	0.003%
165	8.863	8.848	8.878	VV	1788	19849	0.24%	0.008%
166	8.894	8.878	8.922	VV	2173	39962	0.49%	0.015%
167	8.971	8.922	8.984	VV	9077	139632	1.71%	0.054%
168	8.990	8.984	9.019	VV	5756	53636	0.66%	0.021%
169	9.037	9.019	9.046	VV	1050	11543	0.14%	0.004%
170	9.057	9.046	9.077	VV	1620	19379	0.24%	0.008%
171	9.085	9.077	9.099	VV	589	7014	0.09%	0.003%
172	9.109	9.099	9.114	VV	637	4719	0.06%	0.002%
173	9.146	9.114	9.164	VV	2720	44705	0.55%	0.017%
174	9.184	9.164	9.196	VV	1495	20138	0.25%	0.008%
175	9.230	9.196	9.247	VV	2739	55983	0.69%	0.022%
176	9.268	9.247	9.294	VV	3646	61976	0.76%	0.024%
177	9.310	9.294	9.319	VV	2119	21628	0.27%	0.008%
178	9.332	9.319	9.375	VV	2625	41697	0.51%	0.016%
179	9.412	9.375	9.422	VV	3032	40722	0.50%	0.016%
180	9.437	9.422	9.455	VV	5563	71664	0.88%	0.028%
181	9.462	9.455	9.487	VV	2043	25379	0.31%	0.010%
182	9.506	9.487	9.544	VV	2861	41701	0.51%	0.016%
183	9.560	9.544	9.577	VV	1670	20980	0.26%	0.008%
184	9.593	9.577	9.610	VV	1051	16994	0.21%	0.007%
185	9.648	9.610	9.668	VV	5872	85883	1.05%	0.033%
186	9.695	9.668	9.722	VV	1765	34944	0.43%	0.014%
187	9.744	9.722	9.765	PV	5115	61016	0.75%	0.024%
188	9.781	9.765	9.823	VV	6387	92065	1.13%	0.036%
189	9.834	9.823	9.840	VV	473	3488	0.04%	0.001%
190	9.864	9.840	9.907	VV	1741	43262	0.53%	0.017%
191	9.926	9.907	9.951	VV	3492	50647	0.62%	0.020%
192	9.976	9.951	9.980	VV	1092	14862	0.18%	0.006%
193	9.992	9.980	10.013	VV	1418	16823	0.21%	0.007%
194	10.061	10.013	10.089	VV	41456	477453	5.86%	0.185%

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195	10.107	10.089	10.166	VV	5110	139664	1.71%	0.054%
196	10.196	10.166	10.253	VV	199490	2446631	30.42%	0.000%
197	10.276	10.253	10.333	VV	3411	84902	0.04%	0.000%
198	10.357	10.333	10.378	VV	2163	32487	0.03%	0.000%
199	10.380	10.378	10.404	VV	902	9613	0.01%	0.000%
200	10.417	10.404	10.430	VV	613	7016	0.01%	0.000%
201	10.454	10.430	10.479	VV	729	13726	0.17%	0.005%
202	10.505	10.479	10.518	PV	1985	26331	0.32%	0.010%
203	10.534	10.518	10.553	VV	3444	41745	0.51%	0.016%
204	10.559	10.553	10.573	VV	910	8813	0.11%	0.003%
205	10.586	10.573	10.601	VV	1155	14876	0.18%	0.006%
206	10.622	10.601	10.652	VV	2580	55922	0.69%	0.022%
207	10.669	10.652	10.703	VV	2558	55233	0.68%	0.021%
208	10.706	10.703	10.728	VV	1394	12294	0.15%	0.005%
209	10.753	10.728	10.768	PV	2155	30807	0.38%	0.012%
210	10.784	10.768	10.792	VV	2342	27004	0.33%	0.010%
211	10.811	10.792	10.825	VV	10447	125741	1.54%	0.049%
212	10.839	10.825	10.872	VV	10604	156068	1.92%	0.060%
213	10.891	10.872	10.912	VV	5904	72262	0.89%	0.028%
214	10.958	10.912	10.973	VV	7033	109128	1.34%	0.042%
215	10.990	10.973	11.035	VV	6728	133591	1.64%	0.052%
216	11.058	11.035	11.073	VV	2322	33978	0.42%	0.013%
217	11.087	11.073	11.103	VV	1909	21587	0.26%	0.008%
218	11.115	11.103	11.140	VV	951	12418	0.15%	0.005%
219	11.189	11.140	11.210	VV	149976	1788852	21.95%	0.693%
220	11.215	11.210	11.242	VV	19571	205230	2.52%	0.080%
221	11.264	11.242	11.289	VV	26423	331647	4.07%	0.129%
222	11.299	11.289	11.340	VV	3402	71401	0.88%	0.028%
223	11.344	11.340	11.354	VV	1387	10842	0.13%	0.004%
224	11.371	11.354	11.382	VV	1808	25562	0.31%	0.010%
225	11.393	11.382	11.420	VV	1690	23370	0.29%	0.009%
226	11.442	11.420	11.462	PV	3264	40301	0.49%	0.016%
227	11.483	11.462	11.534	VV	13560	174446	2.14%	0.068%
228	11.553	11.534	11.565	VV	582	7398	0.09%	0.003%
229	11.642	11.565	11.695	VV	198759	2508234	30.78%	0.972%
230	11.716	11.695	11.749	VV	12709	212641	2.61%	0.082%
231	11.767	11.749	11.771	VV	2703	25353	0.31%	0.010%
232	11.788	11.771	11.815	VV	4335	71014	0.87%	0.028%
233	11.837	11.815	11.861	VV	10125	124380	1.53%	0.048%
234	11.888	11.861	11.935	VV	31988	460459	5.65%	0.178%
235	11.955	11.935	11.973	VV	3854	54614	0.67%	0.021%
236	11.994	11.973	12.009	VV	16292	185058	2.27%	0.072%
237	12.025	12.009	12.076	VV	21255	388361	4.77%	0.150%
238	12.108	12.076	12.127	VV	18519	280965	3.45%	0.109%
239	12.144	12.127	12.154	VV	12855	142968	1.75%	0.055%
240	12.171	12.154	12.211	VV	22589	315376	3.87%	0.122%
241	12.226	12.211	12.234	VV	884	7724	0.09%	0.003%
242	12.259	12.234	12.278	VV	2771	38423	0.47%	0.015%
243	12.328	12.278	12.337	PV	5672	90917	1.12%	0.035%
244	12.356	12.337	12.388	VV	22838	337916	4.15%	0.131%
245	12.411	12.388	12.447	VV	13423	251347	3.08%	0.097%
246	12.470	12.447	12.510	VV	22808	310363	3.81%	0.120%

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Client Sample Data							WASTE MS	
247	12.526	12.510	12.538	VV	1591	20834	0.26%	0.008%
248	12.572	12.538	12.630	VV	140318	1843669	22.55%	0.000%
249	12.646	12.630	12.655	VV	2757	32621	0.00%	0.000%
250	12.669	12.655	12.686	VV	3117	45991	0.00%	0.000%
251	12.699	12.686	12.705	VV	2528	23958	0.00%	0.000%
252	12.720	12.705	12.734	VV	2709	40917	0.00%	0.000%
253	12.740	12.734	12.755	VV	2194	18059	0.22%	0.007%
254	12.787	12.755	12.794	PV	4316	52230	0.64%	0.020%
255	12.807	12.794	12.828	VV	6822	90814	1.11%	0.035%
256	12.849	12.828	12.871	VV	15503	207523	2.55%	0.080%
257	12.896	12.871	12.917	VV	13467	211034	2.59%	0.082%
258	12.956	12.917	12.985	VV	194495	2410006	29.58%	0.934%
259	13.016	12.985	13.064	VV	265817	3118150	38.27%	1.208%
260	13.083	13.064	13.099	VV	2736	43169	0.53%	0.017%
261	13.145	13.099	13.159	VV	19173	299153	3.67%	0.116%
262	13.177	13.159	13.214	VV	42589	678050	8.32%	0.263%
263	13.228	13.214	13.248	VV	6780	99328	1.22%	0.038%
264	13.252	13.248	13.273	VV	3141	30418	0.37%	0.012%
265	13.314	13.273	13.340	VV	196956	2380954	29.22%	0.923%
266	13.369	13.340	13.388	VV	37615	497906	6.11%	0.193%
267	13.402	13.388	13.436	VV	21050	244549	3.00%	0.095%
268	13.457	13.436	13.469	PV	2115	25396	0.31%	0.010%
269	13.503	13.469	13.538	VV	18861	358018	4.39%	0.139%
270	13.584	13.538	13.603	VV	29268	510608	6.27%	0.198%
271	13.617	13.603	13.624	VV	13537	145885	1.79%	0.057%
272	13.638	13.624	13.654	VV	20221	279389	3.43%	0.108%
273	13.664	13.654	13.686	VV	16119	198005	2.43%	0.077%
274	13.712	13.686	13.728	VV	7372	143669	1.76%	0.056%
275	13.737	13.728	13.748	VV	4989	55279	0.68%	0.021%
276	13.774	13.748	13.784	VV	18067	250791	3.08%	0.097%
277	13.802	13.784	13.856	VV	47120	660266	8.10%	0.256%
278	13.903	13.856	13.941	VV	27185	451851	5.55%	0.175%
279	13.974	13.941	13.987	VV	2833	39612	0.49%	0.015%
280	14.015	13.987	14.033	VV	15320	236905	2.91%	0.092%
281	14.051	14.033	14.074	VV	17179	243388	2.99%	0.094%
282	14.093	14.074	14.122	VV	8709	142640	1.75%	0.055%
283	14.158	14.122	14.201	VV	176892	2499302	30.67%	0.969%
284	14.222	14.201	14.246	VV	13036	189100	2.32%	0.073%
285	14.256	14.246	14.261	VV	2195	16630	0.20%	0.006%
286	14.281	14.261	14.286	VV	5730	58259	0.71%	0.023%
287	14.303	14.286	14.324	VV	7481	113940	1.40%	0.044%
288	14.340	14.324	14.350	VV	2828	36044	0.44%	0.014%
289	14.403	14.350	14.422	VV	10460	262025	3.22%	0.102%
290	14.440	14.422	14.461	VV	8625	106342	1.31%	0.041%
291	14.485	14.461	14.517	PV	5490	94241	1.16%	0.037%
292	14.545	14.517	14.568	VV	30656	434201	5.33%	0.168%
293	14.589	14.568	14.612	VV	28121	413858	5.08%	0.160%
294	14.642	14.612	14.697	VV	27556	644993	7.92%	0.250%
295	14.721	14.697	14.740	VV	22013	318778	3.91%	0.124%
296	14.746	14.740	14.773	VV	10276	133089	1.63%	0.052%
297	14.821	14.773	14.862	VV	30501	858328	10.53%	0.333%
298	14.884	14.862	14.909	VV	32254	469586	5.76%	0.182%
299	14.947	14.909	14.991	VV	75125	1157750	14.21%	0.449%

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300	15.012	14.991	15.026	VV	9663	135977	1.67%	0.053%
301	15.060	15.026	15.088	VV	72093	1183265		
302	15.096	15.088	15.128	VV	9768	133010		
303	15.154	15.128	15.170	VV	14393	195011		
304	15.199	15.170	15.220	VV	111341	1511495		
305	15.241	15.220	15.250	VV	111981	1341979		
306	15.264	15.250	15.295	VV	170688	2231241	27.38%	0.865%
307	15.310	15.295	15.328	VV	10291	133010	1.63%	0.052%
308	15.361	15.328	15.388	VV	23392	394974	4.85%	0.153%
309	15.391	15.388	15.417	VV	5729	73414	0.90%	0.028%
310	15.446	15.417	15.467	VV	8428	147907	1.82%	0.057%
311	15.482	15.467	15.488	VV	4026	38409	0.47%	0.015%
312	15.507	15.488	15.524	VV	12424	174855	2.15%	0.068%
313	15.538	15.524	15.568	VV	7347	137058	1.68%	0.053%
314	15.581	15.568	15.610	VV	4562	93118	1.14%	0.036%
315	15.643	15.610	15.677	VV	81546	1117813	13.72%	0.433%
316	15.684	15.677	15.710	VV	5416	67235	0.83%	0.026%
317	15.726	15.710	15.730	VV	1620	13679	0.17%	0.005%
318	15.746	15.730	15.763	VV	2458	36719	0.45%	0.014%
319	15.787	15.763	15.798	VV	17872	232673	2.86%	0.090%
320	15.808	15.798	15.824	VV	15695	219489	2.69%	0.085%
321	15.830	15.824	15.836	VV	10179	71883	0.88%	0.028%
322	15.839	15.836	15.849	VV	10628	79294	0.97%	0.031%
323	15.874	15.849	15.896	VV	21819	368717	4.52%	0.143%
324	15.914	15.896	15.937	VV	10368	129405	1.59%	0.050%
325	15.959	15.937	15.967	VV	3541	34261	0.42%	0.013%
326	16.007	15.967	16.034	VV	61492	1041984	12.79%	0.404%
327	16.038	16.034	16.047	VV	16196	125302	1.54%	0.049%
328	16.058	16.047	16.084	VV	17255	237848	2.92%	0.092%
329	16.117	16.084	16.131	VV	5526	97742	1.20%	0.038%
330	16.160	16.131	16.182	VV	8335	139923	1.72%	0.054%
331	16.197	16.182	16.222	VV	5701	78407	0.96%	0.030%
332	16.245	16.222	16.262	VV	7636	117145	1.44%	0.045%
333	16.291	16.262	16.329	VV	156182	2132366	26.17%	0.826%
334	16.353	16.329	16.379	VV	11702	159849	1.96%	0.062%
335	16.419	16.379	16.449	VV	4513	93185	1.14%	0.036%
336	16.502	16.449	16.532	PV	9104	249280	3.06%	0.097%
337	16.551	16.532	16.565	VV	6824	96614	1.19%	0.037%
338	16.583	16.565	16.598	VV	8073	126674	1.55%	0.049%
339	16.602	16.598	16.625	VV	6600	83071	1.02%	0.032%
340	16.662	16.625	16.723	VV	120895	2008652	24.65%	0.778%
341	16.768	16.723	16.787	VV	140962	2199094	26.99%	0.852%
342	16.792	16.787	16.818	VV	57197	603310	7.40%	0.234%
343	16.845	16.818	16.872	VV	11416	284160	3.49%	0.110%
344	16.897	16.872	16.919	VV	25977	401291	4.92%	0.156%
345	16.935	16.919	16.966	VV	9748	208666	2.56%	0.081%
346	16.993	16.966	17.033	VV	45600	871903	10.70%	0.338%
347	17.089	17.033	17.118	VV	82854	1494226	18.34%	0.579%
348	17.147	17.118	17.191	VV	110675	1679918	20.62%	0.651%
349	17.246	17.191	17.278	VV	175910	2846965	34.94%	1.103%
350	17.298	17.278	17.304	VV	20736	267278	3.28%	0.104%
351	17.323	17.304	17.348	VV	34305	599903	7.36%	0.232%

Instrument :

FID_F

ClientSampleId :

WASTEMSD

Manual IntegrationsAPPROVED

Reviewed By :Rahul Chavli 10/31/2025

Supervised By :Yogesh Patel 10/31/2025

					rteres				
352	17.363	17.348	17.369	VV	12332	147751	1.81%	0.057%	
353	17.392	17.369	17.417	VV	14796	373319			
354	17.456	17.417	17.464	VV	13654	354981			
355	17.521	17.464	17.547	VV	25908	911302	11.44%	0.247%	
356	17.551	17.547	17.559	VV	15658	111830			
357	17.563	17.559	17.579	VV	15287	172735			
358	17.609	17.579	17.640	VV	118890	2046875	25.12%	0.793%	
359	17.646	17.640	17.658	VV	23263	249123	3.06%	0.097%	
360	17.699	17.658	17.725	VV	126209	2244272	27.54%	0.870%	
361	17.736	17.725	17.752	VV	20848	313887	3.85%	0.122%	
362	17.769	17.752	17.772	VV	21509	227471	2.79%	0.088%	
363	17.778	17.772	17.787	VV	21739	180848	2.22%	0.070%	
364	17.809	17.787	17.838	VV	24462	637111	7.82%	0.247%	
365	17.867	17.838	17.887	VV	25894	632739	7.76%	0.245%	
366	17.917	17.887	17.945	VV	23931	701543	8.61%	0.272%	
367	17.969	17.945	18.006	VV	24206	757244	9.29%	0.293%	
368	18.055	18.006	18.080	VV	33117	1129447	13.86%	0.438%	
369	18.139	18.080	18.167	VV	181439	3812377	46.78%	1.477%	
370	18.181	18.167	18.197	VV	52227	805573	9.89%	0.312%	
371	18.226	18.197	18.270	VV	68761	2002751	24.58%	0.776%	
372	18.303	18.270	18.314	VV	37822	913787	11.21%	0.354%	
373	18.320	18.314	18.337	VV	35533	450672	5.53%	0.175%	
374	18.367	18.337	18.398	VV	63709	1538009	18.87%	0.596%	
375	18.434	18.398	18.447	VV	50518	1168326	14.34%	0.453%	
376	18.462	18.447	18.473	VV	54526	822384	10.09%	0.319%	
377	18.496	18.473	18.509	VV	131518	2131487	26.16%	0.826%	
378	18.530	18.509	18.548	VV	226915	3755298	46.08%	1.455%	
379	18.563	18.548	18.595	VV	172216	3055089	37.49%	1.184%	
380	18.610	18.595	18.631	VV	39900	801551	9.84%	0.311%	
381	18.659	18.631	18.677	VV	67072	1436704	17.63%	0.557%	
382	18.694	18.677	18.750	VV	56960	1932969	23.72%	0.749%	
383	18.782	18.750	18.811	VV	98666	2100263	25.77%	0.814%	
384	18.860	18.811	18.892	VV	90392	2871807	35.24%	1.113%	
385	18.916	18.892	18.933	VV	66570	1392899	17.09%	0.540%	
386	18.976	18.933	19.035	VV	217665	5814985	71.36%	2.253%	
387	19.081	19.035	19.118	VV	130602	3681569	45.18%	1.427%	
388	19.132	19.118	19.160	VV	50271	1213241	14.89%	0.470%	
389	19.182	19.160	19.205	VV	48341	1229356	15.09%	0.476%	
390	19.219	19.205	19.224	VV	47603	541895	6.65%	0.210%	
391	19.252	19.224	19.269	VV	58628	1434220	17.60%	0.556%	
392	19.330	19.269	19.359	VV	354117	8148740	100.00%	3.158%	
393	19.376	19.359	19.425	VV	146744	3959482	48.59%	1.534%	
394	19.452	19.425	19.478	VV	95064	2538479	31.15%	0.984%	
395	19.505	19.478	19.558	VV	117311	3751689	46.04%	1.454%	
396	19.613	19.558	19.647	VV	131623	4409886	54.12%	1.709%	
397	19.669	19.647	19.709	VV	88978	2670411	32.77%	1.035%	
398	19.765	19.709	19.802	VV	242230	5995365	73.57%	2.323%	
399	19.827	19.802	19.852	VV	145149	2966266	36.40%	1.149%	
400	19.874	19.852	19.912	VV	99821	2725525	33.45%	1.056%	
401	19.945	19.912	19.970	VV	86622	2494101	30.61%	0.967%	
402	19.984	19.970	19.994	VV	66560	959140	11.77%	0.372%	
403	20.022	19.994	20.052	VV	94793	2775292	34.06%	1.075%	
404	20.058	20.052	20.081	VV	72573	1223539	15.02%	0.474%	

Instrument :

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ClientSampleId :

WASTEMSD

Manual IntegrationsAPPROVED

Reviewed By :Rahul Chavli 10/31/2025

Supervised By :Yogesh Patel 10/31/2025

					rters				
405	20.111	20.081	20.134	VV	131979	3202053	39.30%	1.241%	
406	20.142	20.134	20.156	VV	93047	1165575	14.00%	0.851%	
407	20.169	20.156	20.193	VV	84747	1735975	21.00%	0.851%	
408	20.208	20.193	20.218	VV	69068	1030609	12.00%	0.851%	
409	20.238	20.218	20.242	VV	74790	1009102	12.00%	0.851%	
410	20.265	20.242	20.297	VV	77191	2484553	30.00%	0.851%	
411	20.325	20.297	20.354	VV	100703	2917482	35.80%	1.131%	
412	20.395	20.354	20.400	VV	86964	2196415	26.95%	0.851%	
413	20.411	20.400	20.422	VV	89871	1136310	13.94%	0.440%	
414	20.439	20.422	20.460	VV	94268	2013134	24.70%	0.780%	
415	20.471	20.460	20.478	VV	81493	879852	10.80%	0.341%	
416	20.511	20.478	20.532	VV	244880	4952337	60.77%	1.919%	
417	20.546	20.532	20.581	VV	143367	2980779	36.58%	1.155%	
418	20.621	20.581	20.648	VV	88878	3050013	37.43%	1.182%	
419	20.654	20.648	20.657	VV	71345	381875	4.69%	0.148%	
420	20.679	20.657	20.703	VV	76875	2006067	24.62%	0.777%	
421	20.709	20.703	20.726	VV	73480	991422	12.17%	0.384%	
422	20.730	20.726	20.737	VV	71134	464226	5.70%	0.180%	
423	20.742	20.737	20.748	VV	69964	490951	6.02%	0.190%	
424	20.755	20.748	20.760	VV	69707	490556	6.02%	0.190%	
425	20.766	20.760	20.806	VV	69522	1777247	21.81%	0.689%	
426	20.856	20.806	20.894	VV	73363	3408699	41.83%	1.321%	
427	20.918	20.894	20.964	VV	67340	2569516	31.53%	0.996%	
428	20.997	20.964	21.014	VV	58025	1682090	20.64%	0.652%	
429	21.018	21.014	21.025	VV	54811	354754	4.35%	0.137%	
430	21.060	21.025	21.080	VV	77258	2213318	27.16%	0.858%	
431	21.102	21.080	21.115	VV	69592	1384099	16.99%	0.536%	
432	21.129	21.115	21.141	VV	70842	1112995	13.66%	0.431%	
433	21.148	21.141	21.179	VV	69545	1523342	18.69%	0.590%	
434	21.198	21.179	21.230	VV	72759	2095103	25.71%	0.812%	
435	21.270	21.230	21.305	VV	196797	5054815	62.03%	1.959%	
436	21.330	21.305	21.357	VV	61623	1714462	21.04%	0.664%	
437	21.361	21.357	21.379	VV	48303	621011	7.62%	0.241%	
438	21.384	21.379	21.395	VV	47811	459138	5.63%	0.178%	
439	21.404	21.395	21.459	VV	46500	1567300	19.23%	0.607%	
440	21.474	21.459	21.482	VV	36871	491698	6.03%	0.191%	
441	21.489	21.482	21.498	VV	35933	338044	4.15%	0.131%	
442	21.506	21.498	21.514	VV	35862	332366	4.08%	0.129%	
443	21.535	21.514	21.540	VV	37036	557245	6.84%	0.216%	
444	21.552	21.540	21.575	VV	38548	769270	9.44%	0.298%	
445	21.589	21.575	21.611	VV	37192	774101	9.50%	0.300%	
446	21.622	21.611	21.645	VV	34051	657291	8.07%	0.255%	
447	21.671	21.645	21.700	VV	31565	948558	11.64%	0.368%	
448	21.768	21.700	21.816	VV	36546	2033631	24.96%	0.788%	
449	21.821	21.816	21.852	VV	26242	543328	6.67%	0.211%	
450	21.857	21.852	21.863	VV	24455	159312	1.96%	0.062%	
451	21.879	21.863	21.914	VV	26131	702660	8.62%	0.272%	
452	21.949	21.914	21.955	VV	23851	540232	6.63%	0.209%	
453	21.961	21.955	21.965	VV	23525	144835	1.78%	0.056%	
454	21.981	21.965	22.007	VV	24209	565302	6.94%	0.219%	
455	22.031	22.007	22.059	VV	28916	788860	9.68%	0.306%	
456	22.064	22.059	22.068	VV	23908	125752	1.54%	0.049%	

Instrument :

FID_F

ClientSampleId :

WASTEMSD

Manual IntegrationsAPPROVED

Reviewed By :Rahul Chavli 10/31/2025

Supervised By :Yogesh Patel 10/31/2025

Instrument :
FID_F
ClientSampleId :
WASTEMSD

Manual IntegrationsAPPROVED

Reviewed By :Rahul Chavli	10/31/2025
Supervised By :Yogesh Patel	10/31/2025

Manual Integration Report

Sample ID	ClientID ID	File ID	Sequence ID	Parameter	Supervised By	Supervised On	Reason
Q3474-01		FF016637.D	FF103025	TETRACOSANE-d50 (SURROGA	yogesh	10/31/2025 4:29:34 PM	Peak Integrated by Software incorrectly
Q3474-01MS		FF016638.D	FF103025	N-DOTRIACONTANE	yogesh	10/31/2025 4:29:36 PM	Peak Integrated by Software incorrectly
Q3474-01MS		FF016638.D	FF103025	N-OCTATRIACONTANE	yogesh	10/31/2025 4:29:36 PM	Peak Integrated by Software incorrectly
Q3474-01MS		FF016638.D	FF103025	N-TETRACONTANE	yogesh	10/31/2025 4:29:36 PM	Peak Integrated by Software incorrectly
Q3474-01MSD		FF016639.D	FF103025	N-DOTRIACONTANE	yogesh	10/31/2025 4:29:38 PM	Peak Integrated by Software incorrectly
Q3474-01MSD		FF016639.D	FF103025	N-TETRACONTANE	yogesh	10/31/2025 4:29:38 PM	Peak Integrated by Software incorrectly

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QC Batch ID # FF102925

Review By	yogesh	Review On	10/29/2025 11:13:33 AM
Supervise By	Sohil	Supervise On	10/30/2025 3:49:06 PM
SubDirectory	FF102925	HP Acquire Method	HP Processing Method FF102925
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP24962,PP24964,PP24965,PP24966,PP24967		
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP24963,PP24968		

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	MECL2	FF016601.D	29 Oct 2025 09:11	YP\AJ	Ok
2	I.BLK	FF016602.D	29 Oct 2025 09:40	YP\AJ	Ok
3	100 TRPH STD	FF016603.D	29 Oct 2025 10:39	YP\AJ	Ok
4	50 TRPH STD	FF016604.D	29 Oct 2025 11:08	YP\AJ	Ok
5	20 TRPH STD	FF016605.D	29 Oct 2025 11:38	YP\AJ	Ok
6	10 TRPH STD	FF016606.D	29 Oct 2025 12:07	YP\AJ	Ok
7	5 TRPH STD	FF016607.D	29 Oct 2025 12:37	YP\AJ	Ok
8	FF102925ICV	FF016608.D	29 Oct 2025 13:06	YP\AJ	Ok

M : Manual Integration

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QC Batch ID # FF103025

Review By	yogesh	Review On	10/30/2025 11:10:45 AM
Supervise By	rahul	Supervise On	11/3/2025 8:11:05 AM
SubDirectory	FF103025	HP Acquire Method	HP Processing Method FF102925
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP24962,PP24964,PP24965,PP24966,PP24967		
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP24964 PP24963,PP24968		

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	MECL2	FF016630.D	30 Oct 2025 09:55	YP\AJ	Ok
2	I.BLK	FF016631.D	30 Oct 2025 10:24	YP\AJ	Ok
3	50 PPM TRPH STD	FF016632.D	30 Oct 2025 11:23	YP\AJ	Ok
4	RT MARKER	FF016633.D	30 Oct 2025 11:53	YP\AJ	Ok
5	PB170324BL	FF016634.D	30 Oct 2025 12:22	YP\AJ	Ok
6	PB170324BS	FF016635.D	30 Oct 2025 12:52	YP\AJ	Ok
7	Q3434-01	FF016636.D	30 Oct 2025 13:21	YP\AJ	Ok
8	Q3474-01	FF016637.D	30 Oct 2025 13:51	YP\AJ	Dilution
9	Q3474-01MS	FF016638.D	30 Oct 2025 14:21	YP\AJ	Ok,M
10	Q3474-01MSD	FF016639.D	30 Oct 2025 14:50	YP\AJ	Ok,M
11	Q3474-01	FF016640.D	30 Oct 2025 15:20	YP\AJ	Ok
12	I.BLK	FF016641.D	30 Oct 2025 15:49	YP\AJ	Ok
13	50 PPM TRPH STD	FF016642.D	30 Oct 2025 16:19	YP\AJ	Ok

M : Manual Integration

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QC Batch ID # FF102925

Review By	yogesh	Review On	10/29/2025 11:13:33 AM
Supervise By	Sohil	Supervise On	10/30/2025 3:49:06 PM
SubDirectory	FF102925	HP Acquire Method	HP Processing Method FF102925
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP24962,PP24964,PP24965,PP24966,PP24967		
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP24963,PP24968		

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	MECL2		FF016601.D	29 Oct 2025 09:11		YP\AJ	Ok
2	I.BLK		FF016602.D	29 Oct 2025 09:40		YP\AJ	Ok
3	100 TRPH STD		FF016603.D	29 Oct 2025 10:39		YP\AJ	Ok
4	50 TRPH STD		FF016604.D	29 Oct 2025 11:08		YP\AJ	Ok
5	20 TRPH STD		FF016605.D	29 Oct 2025 11:38		YP\AJ	Ok
6	10 TRPH STD		FF016606.D	29 Oct 2025 12:07		YP\AJ	Ok
7	5 TRPH STD		FF016607.D	29 Oct 2025 12:37		YP\AJ	Ok
8	FF102925ICV		FF016608.D	29 Oct 2025 13:06		YP\AJ	Ok

M : Manual Integration

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QC Batch ID # FF103025

Review By	yogesh	Review On	10/30/2025 11:10:45 AM
Supervise By	rahul	Supervise On	11/3/2025 8:11:05 AM
SubDirectory	FF103025	HP Acquire Method	HP Processing Method FF102925

STD. NAME	STD REF.#
Tune/Reschk Initial Calibration Stds	PP24962,PP24964,PP24965,PP24966,PP24967
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP24964 PP24963,PP24968

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	MECL2		FF016630.D	30 Oct 2025 09:55		YP\AJ	Ok
2	I.BLK		FF016631.D	30 Oct 2025 10:24		YP\AJ	Ok
3	50 PPM TRPH STD		FF016632.D	30 Oct 2025 11:23		YP\AJ	Ok
4	RT MARKER		FF016633.D	30 Oct 2025 11:53		YP\AJ	Ok
5	PB170324BL		FF016634.D	30 Oct 2025 12:22		YP\AJ	Ok
6	PB170324BS		FF016635.D	30 Oct 2025 12:52		YP\AJ	Ok
7	Q3434-01		FF016636.D	30 Oct 2025 13:21		YP\AJ	Ok
8	Q3474-01		FF016637.D	30 Oct 2025 13:51	Need 5X	YP\AJ	Dilution
9	Q3474-01MS		FF016638.D	30 Oct 2025 14:21		YP\AJ	Ok,M
10	Q3474-01MSD		FF016639.D	30 Oct 2025 14:50		YP\AJ	Ok,M
11	Q3474-01		FF016640.D	30 Oct 2025 15:20		YP\AJ	Ok
12	I.BLK		FF016641.D	30 Oct 2025 15:49		YP\AJ	Ok
13	50 PPM TRPH STD		FF016642.D	30 Oct 2025 16:19		YP\AJ	Ok

M : Manual Integration

PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 10/23/2025

OVENTEMP IN Celsius(°C): 107
Time IN: 17:15
In Date: 10/22/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 104
Time OUT: 08:15
Out Date: 10/23/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID-OVEN

QC:LB137614

Lab ID	Client SampleID	Dish #	Dish Wt(g) (A)	Sample Wt(g)	Dish + Sample Wt(g) (B)	Dish+Dry Sample Wt(g) (C)	% Solid	Comments
Q3419-01	PR-132-S16-015094-20251021	1	1.15	11.01	12.16	7.14	54.4	
Q3419-02	Q3419-01MS	2	1.15	11.01	12.16	7.14	54.4	
Q3419-03	Q3419-01MSD	3	1.15	11.01	12.16	7.14	54.4	
Q3419-04	PR-132-S16-119133-20251021	4	1.16	10.07	11.23	6.37	51.7	
Q3419-05	PR-132-S16-094119-20251021	5	1.19	11.07	12.26	6.38	46.9	
Q3422-01	PR132-S15-000008-20251017	6	1.18	11.02	12.2	7.58	58.1	
Q3424-01	PR132-DP3-20251021	7	1.15	10.36	11.51	5.91	45.9	
Q3424-02	PR132-S11-010080-20251021	8	1.12	10.72	11.84	6.49	50.1	
Q3424-03	PR132-S14-00094-20251021	9	1.14	11.34	12.48	6.82	50.1	
Q3427-01	TP-8	10	1.11	10.77	11.88	10.84	90.3	
Q3427-02	TP-8-EPH	11	1.18	10.97	12.15	10.98	89.3	
Q3427-03	TP-8-VOC	12	1.19	10.26	11.45	10.52	90.9	
Q3429-01	40309	13	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
Q3429-02	40310	14	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
Q3430-01	BUR-25-0095	15	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
Q3431-01	EO-02-10222025	16	1.11	10.55	11.66	10.64	90.3	
Q3431-02	EO-02-10222025-E2	17	1.17	10.59	11.76	10.59	89.0	
Q3434-01	PR132-WC1-20251022	18	1.13	10.43	11.56	7.17	57.9	

$$\% \text{ Solid} = \frac{(C-A) * 100}{(B-A)}$$

WORKLIST(Hardcopy Internal Chain)

UB 137614

WorkList Name : %1-102225

WorkList ID : 192597

Department : Wet-Chemistry

Date : 10-22-2025 09:03:13

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q3419-01	PR-132-S16-015094-20251021	Solid	Percent Solids	Cool 4 deg C	AECO02	D41	10/21/2025	Chemtech -SO
Q3419-02	Q3419-01MS	Solid	Percent Solids	Cool 4 deg C	AECO02	D41	10/21/2025	Chemtech -SO
Q3419-03	Q3419-01MSD	Solid	Percent Solids	Cool 4 deg C	AECO02	D41	10/21/2025	Chemtech -SO
Q3419-04	PR-132-S16-119133-20251021	Solid	Percent Solids	Cool 4 deg C	AECO02	D41	10/21/2025	Chemtech -SO
Q3419-05	PR-132-S16-094119-20251021	Solid	Percent Solids	Cool 4 deg C	AECO02	D41	10/21/2025	Chemtech -SO
Q3422-01	PR132-S15-000008-20251017	Solid	Percent Solids	Cool 4 deg C	AECO02	D41	10/21/2025	Chemtech -SO
Q3424-01	PR132-DP3-20251021	Solid	Percent Solids	Cool 4 deg C	AECO02	D31	10/21/2025	Chemtech -SO
Q3424-02	PR132-S11-010080-20251021	Solid	Percent Solids	Cool 4 deg C	AECO02	D31	10/21/2025	Chemtech -SO
Q3424-03	PR132-S14-00094-20251021	Solid	Percent Solids	Cool 4 deg C	AECO02	D31	10/21/2025	Chemtech -SO
Q3427-01	TP-8	Solid	Percent Solids	Cool 4 deg C	PSEG03	D41	10/21/2025	Chemtech -SO
Q3427-02	TP-8-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	D41	10/21/2025	Chemtech -SO
Q3427-03	TP-8-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	D41	10/21/2025	Chemtech -SO
Q3429-01	40309	Solid	Percent Solids	Cool 4 deg C	PSEG03	D51	10/22/2025	Chemtech -SO
Q3429-02	40310	Solid	Percent Solids	Cool 4 deg C	PSEG03	D51	10/22/2025	Chemtech -SO
Q3430-01	BUR-25-0095	Solid	Percent Solids	Cool 4 deg C	PSEG03	D51	10/22/2025	Chemtech -SO
Q3431-01	EO-02-10222025	Solid	Percent Solids	Cool 4 deg C	PSEG05	D41	10/22/2025	Chemtech -SO
Q3431-02	EO-02-10222025-E2	Solid	Percent Solids	Cool 4 deg C	PSEG05	D41	10/22/2025	Chemtech -SO
Q3434-01	PR132-WC1-20251022	Solid	Percent Solids	Cool 4 deg C	AECO02	D41	10/22/2025	Chemtech -SO

Date/Time 10/22/25 15:00

Raw Sample Received by: [Signature]

Raw Sample Relinquished by: [Signature]

Date/Time 10/22/25 17:25

Raw Sample Received by: [Signature]

Raw Sample Relinquished by: [Signature]

SOP ID: M3541-ASE Extraction-15

Clean Up SOP #: N/A

Matrix: Solid

Weigh By: EH

Balance check: EH

Balance ID: EX-SC-2

pH Strip Lot#: N/A

Extraction By: RJ

Filter By: RJ

pH Meter ID: N/A

Hood ID: 3,7

Extraction Start Date: 10/29/2025

Extraction Start Time: 10:55

Extraction End Date: 10/29/2025

Extraction End Time: 13:55

Concentration By: EH

Supervisor By: RUPESH

Extraction Method: ☐ Separatory Funnel ☐ Continous Liquid/Liquid ☐ Sonication ☐ Waste Dilution ☒ Soxhlet

Standard Name	MLS USED	Concentration ug/mL	STD REF. # FROM LOG
Spike Sol 1	1.0ML	20 PPM	PP25013
Surrogate	1.0ML	20 PPM	PP24596
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
MeCl2/Acetone/1:1	N/A	EP2641
Baked Na2SO4	N/A	EP2655
Methylene Chloride	N/A	E3980
Sand	N/A	E3951
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

1.5 ML Vial lot# 2210443.

KD Bath ID: N/A

KD Bath Temperature: N/A

Envap ID: NEVAP-02

Envap Temperature: 40 °C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
10/29/25	RS (Ext lab)	T.P. Pest/PCB
14:00	Preparation Group	Analysis Group

Analytical Method: M3541-ASE Extraction-15

Concentration Date: 10/29/2025

Sample ID	Client Sample ID	Test	g/ mL	PH	Surr/Spike By:		Final Vol. (mL)	JarID	Comments	Prep Pos
					AddedBy	VerifiedBy				
PB170324BL	PB170324BL	TPH GC	30.02	N/A	ritesh	Evelyn	1			U1-1
PB170324BS	PB170324BS	TPH GC	30.03	N/A	ritesh	Evelyn	1			2
Q3434-01	PR132-WC1-20251022	TPH GC	30.06	N/A	ritesh	Evelyn	1	H		3
Q3474-01	WASTE	TPH GC	30.09	N/A	ritesh	Evelyn	1			4
Q3474-01MS	WASTEMS	TPH GC	30.07	N/A	ritesh	Evelyn	1			5
Q3474-01MS D	WASTEMSD	TPH GC	30.06	N/A	ritesh	Evelyn	1			6

RS
10/29

170324
10:55

WORKLIST(Hardcopy Internal Chain)

WorkList Name : Q3474T

WorkList ID : 192783

Department : Extraction

Date : 10-29-2025 10:18:17

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q3434-01	PR132-WC1-20251022	Solid	TPH GC	Cool 4 deg C	AECO02	D41	10/22/2025	8015D
Q3474-01	WASTE	Solid	TPH GC	Cool 4 deg C	SCIA01	J31	10/27/2025	8015D

Date/Time

10/29/25 10:50

Raw Sample Received by:

RJ (Ext-66)

Raw Sample Relinquished by:

AL Sm

Date/Time

10/29/25 11:05

Raw Sample Received by:

AL Sm

Raw Sample Relinquished by:

RJ (Ext-66)

Prep Standard - Chemical Standard Summary

Order ID : Q3434

Test : TPH GC

Prepbatch ID : PB170324,

Sequence ID/Qc Batch ID: FF103025,

Standard ID :

EP2641,EP2655,PP24596,PP24962,PP24963,PP24964,PP24965,PP24966,PP24967,PP24968,PP25013,

Chemical ID :

E3875,E3931,E3951,E3964,E3972,E3973,E3980,P11957,P11961,P13220,P13221,P13222,P13223,P13483,P13484,P13485,P13486,P13491,

Extractions STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2017	1:1 ACETONE/METHYLENE CHLORIDE	EP2641	09/16/2025	03/16/2026	Evelyn Huang	None	None	Riteshkumar Patel
09/16/2025								

FROM 8000.00000ml of E3972 + 8000.00000ml of E3973 = Final Quantity: 16000.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3923	Baked Sodium Sulfate	EP2655	10/24/2025	01/28/2026	RUPESEKUMAR SHAH	Extraction_SC ALE_2 (EX-SC-2)	None	Riteshkumar Patel
10/24/2025								

FROM 4000.00000gram of E3875 = Final Quantity: 4000.000 gram



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3796	100/100 PPM DRO STD (CPI)	PP24963	10/02/2025	04/02/2026	Yogesh Patel	None	None	Abdul Mirza
								10/10/2025

FROM 1.00000ml of P13220 + 1.00000ml of P13221 + 1.00000ml of P13491 + 7.00000ml of E3964 = Final Quantity: 10.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
435	50 PPM ICC DRO STD (Restek)	PP24964	10/02/2025	04/02/2026	Yogesh Patel	None	None	Abdul Mirza
								10/10/2025

FROM 0.50000ml of E3973 + 0.50000ml of PP24962 = Final Quantity: 1.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
437	20 PPM ICC DRO STD (Restek)	PP24965	10/02/2025	04/02/2026	Yogesh Patel	None	None	Abdul Mirza
								10/10/2025

FROM 0.80000ml of E3973 + 0.20000ml of PP24962 = Final Quantity: 1.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
438	10 PPM ICC DRO STD (Restek)	PP24966	10/02/2025	04/02/2026	Yogesh Patel	None	None	Abdul Mirza
								10/10/2025

FROM 0.90000ml of E3973 + 0.10000ml of PP24962 = Final Quantity: 1.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
439	5 PPM ICC DRO STD (Restek)	PP24967	10/02/2025	04/02/2026	Yogesh Patel	None	None	Abdul Mirza
								10/10/2025

FROM 0.90000ml of E3973 + 0.10000ml of PP24964 = Final Quantity: 1.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3797	50 PPM DRO ICV STD (CPI)	PP24968	10/02/2025	04/02/2026	Yogesh Patel	None	None	Abdul Mirza
								10/10/2025

FROM 0.50000ml of E3973 + 0.50000ml of PP24963 = Final Quantity: 1.000 ml



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3795	20 PPM DRO SPIKE SOLUTION (CPI)	PP25013	10/28/2025	04/16/2026	Abdul Mirza	None	None	Yogesh Patel
<u>FROM</u> 1.00000ml of P13222 + 1.00000ml of P13223 + 48.00000ml of E3980 = Final Quantity: 50.000 ml								

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	PC19631-100 / SODIUM SULFATE, ANHYDROUS, PEST GRADE, 1	417203	01/28/2026	07/28/2025 / RUPESH	01/29/2025 / Rajesh	E3875

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9644-A4 / Methylene Chloride,U-Resi, Cycle-Tainer (215L)	25A0262002	02/20/2026	05/02/2025 / RUPESH	03/09/2025 / RUPESH	E3931

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3382-05 / Sand, Purified (cs/4x2.5kg)	25A2756718	12/31/2028	07/09/2025 / RUPESH	04/28/2020 / RUPESH	E3951

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9644-A4 / Methylene Chloride,U-Resi, Cycle-Tainer (215L)	25C1262005	04/16/2026	08/14/2025 / RUPESH	03/06/2025 / RUPESH	E3964

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9254-03 / Acetone, Ultra Resi (cs/4x4L)	24H1462005	05/24/2027	09/16/2025 / Evelyn	09/04/2025 / Riteshkumar	E3972

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9644-A4 / Methylene Chloride,U-Resi, Cycle-Tainer (215L)	25C1262005	04/16/2026	09/15/2025 / Riteshkumar	09/15/2025 / Riteshkumar	E3973

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9644-A4 / Methylene Chloride,U-Resi, Cycle-Tainer (215L)	25C1262005	04/16/2026	10/10/2025 / RUPESH	10/10/2025 / RUPESH	E3980

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31266 / Florida TRPH Standard	A0186840	04/02/2026	10/02/2025 / yogesh	07/11/2022 / Yogesh	P11957

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31266 / Florida TRPH Standard	A0186840	04/02/2026	10/02/2025 / yogesh	07/11/2022 / Yogesh	P11961

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
CPI International	Z-110400-05-01 / TRPH Standard (C8-C40), 500 mg/L, 1 ml	514983	10/02/2026	10/02/2025 / yogesh	01/31/2024 / Ankita	P13220

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
CPI International	Z-110400-05-01 / TRPH Standard (C8-C40), 500 mg/L, 1 ml	514983	10/02/2026	10/02/2025 / yogesh	01/31/2024 / Ankita	P13221

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
CPI International	Z-110400-05-01 / TRPH Standard (C8-C40), 500 mg/L, 1 ml	514983	04/28/2026	10/28/2025 / Abdul	01/31/2024 / Ankita	P13222

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
CPI International	Z-110400-05-01 / TRPH Standard (C8-C40), 500 mg/L, 1 ml	514983	04/28/2026	10/28/2025 / Abdul	01/31/2024 / Ankita	P13223

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	72072 / n-Tetracosane-d50, 1000 ug/ml	101122	11/20/2025	05/20/2025 / Abdul	07/24/2024 / yogesh	P13483

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	72072 / n-Tetracosane-d50, 1000 ug/ml	101122	11/20/2025	05/20/2025 / Abdul	07/24/2024 / yogesh	P13484

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	72072 / n-Tetracosane-d50, 1000 ug/ml	101122	11/20/2025	05/20/2025 / Abdul	07/24/2024 / yogesh	P13485

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	72072 / n-Tetracosane-d50, 1000 ug/ml	101122	11/20/2025	05/20/2025 / Abdul	07/24/2024 / yogesh	P13486

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	72072 / n-Tetracosane-d50, 1000 ug/ml	101122	04/02/2026	10/02/2025 / yogesh	07/24/2024 / yogesh	P13491



**PRODUCTOS
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MONTERREY, N.L. MÉXICO
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TEL +52 81 13 52 67 67
www.pqm.com.mx

CERTIFICATE OF ANALYSIS

PRODUCT :	SODIUM SULFATE CRYSTALS ANHYDROUS		
QUALITY :	ACS (CODE RMB3375)	FORMULA :	Na ₂ SO ₄
SPECIFICATION NUMBER:	6399	RELEASE DATE:	MAY/23/2024
LOT NUMBER :	417203		

TEST	SPECIFICATIONS	LOT VALUES
Assay (Na ₂ SO ₄)	Min. 99.0%	99.8 %
pH of a 5% solution at 25°C	5.2 - 9.2	6.2
Insoluble matter	Max. 0.01%	0.001 %
Loss on ignition	Max. 0.5%	0.1 %
Chloride (Cl)	Max. 0.001%	<0.001 %
Nitrogen compounds (as N)	Max. 5 ppm	<5 ppm
Phosphate (PO ₄)	Max. 0.001%	<0.001 %
Heavy metals (as Pb)	Max. 5 ppm	<5 ppm
Iron (Fe)	Max. 0.001%	<0.001 %
Calcium (Ca)	Max. 0.01%	0.001 %
Magnesium (Mg)	Max. 0.005%	0.001 %
Potassium (K)	Max. 0.008%	0.001 %
Extraction-concentration suitability	Passes test	Passes test
Appearance	Passes test	Passes test
Identification	Passes test	Passes test
Solubility and foreign matter	Passes test	Passes test
Retained on US Standard No. 10 sieve	Max. 1%	0.2 %
Retained on US Standard No. 60 sieve	Min. 94%	96.2 %
Through US Standard No. 60 sieve	Max. 5%	3.5 %
Through US Standard No. 100 sieve	Max. 10%	0.1 %

COMMENTS

QC: PhC Irma Belmares

If you need further details, please call our factory or contact our local distributor.

RE-02-01, Ed. 3

E 3875

Methylene Chloride
ULTRA RESI-ANALYZED
For Organic Residue Analysis
(dichloromethane)



Material No.: 9266-A4
Batch No.: 25A0262002
Manufactured Date: 2024-11-21
Expiration Date: 2026-02-20
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	≤ 5	1
ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL)	≤ 10	4
Assay (CH ₂ Cl ₂) (by GC, exclusive of preservative, corrected for water)	$\geq 99.8 \%$	99.9 %
Color (APHA)	≤ 10	10
Residue after Evaporation	≤ 1.0 ppm	0.8 ppm
Titration Acid (μ eq/g)	≤ 0.3	<0.1
Chloride (Cl)	≤ 10 ppm	<5 ppm
Water (by KF, coulometric)	$\leq 0.02 \%$	<0.01 %

For Laboratory, Research, or Manufacturing Use
MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: United States
Packaging Site: Phillipsburg Mfg Ctr & DC

E3930

Jamie Croak
Director Quality Operations, Bioscience Production

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials, LLC

100 Matsonford Rd, Suite 200, Radnor, PA, 19087, U.S.A. Phone 610.386.1700



Material	BDH9274-2.5KG
Material Description	BDH SAND STDD OTTAWA W+I 2.5KG
Grade	NOT APPLICABLE
Batch	25A2756718
Reassay Date	12/31/2028
CAS Number	14808-60-7
Molecular Formula	SiO ₂
Molecular Mass	60.09
Date of Manufacture	12/05/2024
Storage	Room Temperature

Characteristics	Specifications	Measured Values
Appearance	Beige granules.	Beige granules.
Moisture	<= 0.1 %	0.1 %
Particle Size 30-40 mesh	>= 80 %	99 %
CUSTOMER PART # BDH9274-2.5KG		

Received on 1/12/25.

E3951

Internal ID #: 793

Signature	Additional Information
We certify that this batch conforms to the specifications listed above. This document has been electronically produced and is valid without a signature. Leona Edwardson, Quality Control Sr. Manager - Solon VWR Chemicals, LLC. 28600 Fountain Parkway, Solon OH 44139 USA	Analysis may have been rounded to significant digits in specification limits Product meets analytical specifications of the grades listed.

Methylene Chloride
ULTRA RESI-ANALYZED
For Organic Residue Analysis
(dichloromethane)



Material No.: 9266-A4
Batch No.: 25C1262005
Manufactured Date: 2025-01-15
Expiration Date: 2026-04-16
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	≤ 5	1
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	≤ 10	1
Assay (CH_2Cl_2) (by GC, exclusive of preservative, corrected for water)	$\geq 99.8\%$	100.0 %
Color (APHA)	≤ 10	5
Residue after Evaporation	≤ 1.0 ppm	0.1 ppm
Titration Acid ($\mu\text{eq/g}$)	≤ 0.3	< 0.1
Chloride (Cl)	≤ 10 ppm	< 5 ppm
Water (by KF, coulometric)	$\leq 0.02\%$	$< 0.01\%$

For Laboratory, Research, or Manufacturing Use
MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: United States
Packaging Site: Phillipsburg Mfg Ctr & DC

Received on .

E 3964

Jamie Croak
Director Quality Operations, Bioscience Production

Acetone
BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis

avantor™



Material No.: 9254-03

Batch No.: 24H1462005

Manufactured Date: 2024-05-24

Expiration Date: 2027-05-24

Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay ((CH ₃) ₂ CO) (by GC, corrected for water)	>= 99.4 %	99.8 %
Color (APHA)	<= 10	5
Residue after Evaporation	<= 1.0 ppm	0.2 ppm
Substances Reducing Permanganate	Passes Test	Passes Test
Titration Acid (µeq/g)	<= 0.3	0.2
Titration Base (µeq/g)	<= 0.6	<0.1
Water (H ₂ O)	<= 0.5 %	0.2 %
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	<= 5	<1
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	<= 10	1

For Laboratory, Research, or Manufacturing Use
MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: United States
Packaging Site: Phillipsburg Mfg Ctr & DC

E3972

Jamie Croak
Director Quality Operations, Bioscience Production

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials LLC

Methylene Chloride
ULTRA RESI-ANALYZED
For Organic Residue Analysis
(dichloromethane)



Material No.: 9266-A4
Batch No.: 25C1262005
Manufactured Date: 2025-01-15
Expiration Date: 2026-04-16
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	≤ 5	1
ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL)	≤ 10	1
Assay (CH_2Cl_2) (by GC, exclusive of preservative, corrected for water)	$\geq 99.8\%$	100.0 %
Color (APHA)	≤ 10	5
Residue after Evaporation	≤ 1.0 ppm	0.1 ppm
Titration Acid ($\mu\text{eq/g}$)	≤ 0.3	< 0.1
Chloride (Cl)	≤ 10 ppm	< 5 ppm
Water (by KF, coulometric)	$\leq 0.02\%$	$< 0.01\%$

For Laboratory, Research, or Manufacturing Use
MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: United States
Packaging Site: Phillipsburg Mfg Ctr & DC

REC. on 10/10/25
RJ

E3980

Jamie Croak
Director Quality Operations, Bioscience Production

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials, LLC

100 Matsonford Rd, Suite 200, Radnor, PA, 19087, U.S.A. Phone 610.386.1700



110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31266 Lot No.: A0186840
Description : Florida TRPH Standard
Florida TRPH Standard 500µg/mL, Hexane, 1mL/ampul
Container Size : 2 mL Pkg Amt: > 1 mL
Expiration Date : July 31, 2029 Storage: 25°C nominal
Handling: Sonicate prior to use. Ship: Ambient

P11948
L } 7.8
P11962 } 07/11/16

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	n-Octane (C8) CAS # 111-65-9 (Lot SHBN3807) Purity 99%	505.0 µg/mL	+/- 2.9995 µg/mL Gravimetric +/- 12.5465 µg/mL Unstressed +/- 15.0390 µg/mL Stressed
2	n-Decane (C10) CAS # 124-18-5 (Lot SHBN8619) Purity 99%	503.0 µg/mL	+/- 2.9877 µg/mL Gravimetric +/- 12.4968 µg/mL Unstressed +/- 14.9795 µg/mL Stressed
3	n-Dodecane (C12) CAS # 112-40-3 (Lot SHBN7174) Purity 99%	503.5 µg/mL	+/- 2.9906 µg/mL Gravimetric +/- 12.5092 µg/mL Unstressed +/- 14.9944 µg/mL Stressed
4	n-Tetradecane (C14) CAS # 629-59-4 (Lot STBK2282) Purity 99%	505.0 µg/mL	+/- 2.9995 µg/mL Gravimetric +/- 12.5465 µg/mL Unstressed +/- 15.0390 µg/mL Stressed
5	n-Hexadecane (C16) CAS # 544-76-3 (Lot SHBM4146) Purity 98%	504.7 µg/mL	+/- 2.9978 µg/mL Gravimetric +/- 12.5390 µg/mL Unstressed +/- 15.0301 µg/mL Stressed
6	n-Octadecane (C18) CAS # 593-45-3 (Lot VZKOJ) Purity 97%	504.4 µg/mL	+/- 2.9960 µg/mL Gravimetric +/- 12.5316 µg/mL Unstressed +/- 15.0212 µg/mL Stressed
7	n-Eicosane (C20) CAS # 112-95-8 (Lot MKCF7888) Purity 99%	503.5 µg/mL	+/- 2.9906 µg/mL Gravimetric +/- 12.5092 µg/mL Unstressed +/- 14.9944 µg/mL Stressed

8	n-Docosane (C22)		(Lot MKCL8918)	504.5	µg/mL	+/-	2.9966	µg/mL	Gravimetric
	CAS #	629-97-0				+/-	12.5340	µg/mL	Unstressed
	Purity	99%				+/-	15.0241	µg/mL	Stressed
9	n-Tetracosane (C24)		(Lot MKCN2863)	503.5	µg/mL	+/-	2.9906	µg/mL	Gravimetric
	CAS #	646-31-1				+/-	12.5092	µg/mL	Unstressed
	Purity	99%				+/-	14.9944	µg/mL	Stressed
10	n-Hexacosane (C26)		(Lot MKCD4540)	504.0	µg/mL	+/-	2.9936	µg/mL	Gravimetric
	CAS #	630-01-3				+/-	12.5216	µg/mL	Unstressed
	Purity	99%				+/-	15.0093	µg/mL	Stressed
11	n-Octacosane (C28)		(Lot BCCG0084)	504.5	µg/mL	+/-	2.9966	µg/mL	Gravimetric
	CAS #	630-02-4				+/-	12.5340	µg/mL	Unstressed
	Purity	99%				+/-	15.0241	µg/mL	Stressed
12	n-Triacontane (C30)		(Lot MKCN9321)	505.0	µg/mL	+/-	2.9995	µg/mL	Gravimetric
	CAS #	638-68-6				+/-	12.5465	µg/mL	Unstressed
	Purity	99%				+/-	15.0390	µg/mL	Stressed
13	n-Dotriacontane (C32)		(Lot BCBW0661)	505.0	µg/mL	+/-	2.9995	µg/mL	Gravimetric
	CAS #	544-85-4				+/-	12.5465	µg/mL	Unstressed
	Purity	99%				+/-	15.0390	µg/mL	Stressed
14	n-Tetratriacontane (C34)		(Lot OML4N)	504.5	µg/mL	+/-	2.9966	µg/mL	Gravimetric
	CAS #	14167-59-0				+/-	12.5340	µg/mL	Unstressed
	Purity	99%				+/-	15.0241	µg/mL	Stressed
15	n-Hexatriacontane (C36)		(Lot U25B014)	504.0	µg/mL	+/-	2.9936	µg/mL	Gravimetric
	CAS #	630-06-8				+/-	12.5216	µg/mL	Unstressed
	Purity	99%				+/-	15.0093	µg/mL	Stressed
16	n-Octatriacontane (C38)		(Lot 0000127235)	504.4	µg/mL	+/-	2.9960	µg/mL	Gravimetric
	CAS #	7194-85-6				+/-	12.5316	µg/mL	Unstressed
	Purity	97%				+/-	15.0212	µg/mL	Stressed
17	n-Tetracontane (C40)		(Lot PADGI)	504.7	µg/mL	+/-	2.9978	µg/mL	Gravimetric
	CAS #	4181-95-7				+/-	12.5390	µg/mL	Unstressed
	Purity	98%				+/-	15.0301	µg/mL	Stressed
Solvent:	Hexane								
	CAS #	110-54-3							
	Purity	99%							

Column:

30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:

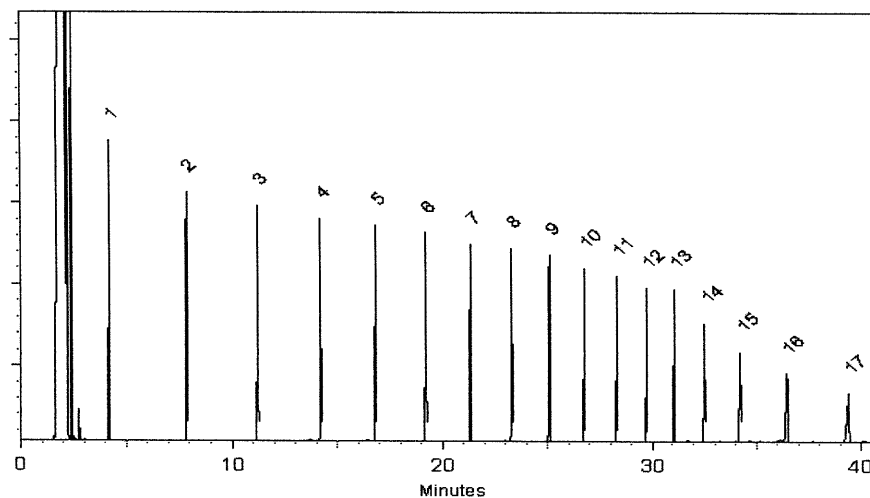
250°C

Det. Temp:

330°C

Det. Type:

FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Brittany Federinko - Operations Tech I

Date Mixed: 29-Jun-2022

Balance: 1128360905

Christie Mills - Operations Tech II - ARM QC

Date Passed: 01-Jul-2022

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/ μ ECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.



110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31266 Lot No.: A0186840
Description : Florida TRPH Standard
Florida TRPH Standard 500µg/mL, Hexane, 1mL/ampul
Container Size : 2 mL Pkg Amt: > 1 mL
Expiration Date : July 31, 2029 Storage: 25°C nominal
Handling: Sonicate prior to use. Ship: Ambient

P11948
L } 7.8
P11962 } 07/11/16

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	n-Octane (C8) CAS # 111-65-9 (Lot SHBN3807) Purity 99%	505.0 µg/mL	+/- 2.9995 µg/mL Gravimetric +/- 12.5465 µg/mL Unstressed +/- 15.0390 µg/mL Stressed
2	n-Decane (C10) CAS # 124-18-5 (Lot SHBN8619) Purity 99%	503.0 µg/mL	+/- 2.9877 µg/mL Gravimetric +/- 12.4968 µg/mL Unstressed +/- 14.9795 µg/mL Stressed
3	n-Dodecane (C12) CAS # 112-40-3 (Lot SHBN7174) Purity 99%	503.5 µg/mL	+/- 2.9906 µg/mL Gravimetric +/- 12.5092 µg/mL Unstressed +/- 14.9944 µg/mL Stressed
4	n-Tetradecane (C14) CAS # 629-59-4 (Lot STBK2282) Purity 99%	505.0 µg/mL	+/- 2.9995 µg/mL Gravimetric +/- 12.5465 µg/mL Unstressed +/- 15.0390 µg/mL Stressed
5	n-Hexadecane (C16) CAS # 544-76-3 (Lot SHBM4146) Purity 98%	504.7 µg/mL	+/- 2.9978 µg/mL Gravimetric +/- 12.5390 µg/mL Unstressed +/- 15.0301 µg/mL Stressed
6	n-Octadecane (C18) CAS # 593-45-3 (Lot VZKOJ) Purity 97%	504.4 µg/mL	+/- 2.9960 µg/mL Gravimetric +/- 12.5316 µg/mL Unstressed +/- 15.0212 µg/mL Stressed
7	n-Eicosane (C20) CAS # 112-95-8 (Lot MKCF7888) Purity 99%	503.5 µg/mL	+/- 2.9906 µg/mL Gravimetric +/- 12.5092 µg/mL Unstressed +/- 14.9944 µg/mL Stressed

8	n-Docosane (C22)		(Lot MKCL8918)	504.5	µg/mL	+/-	2.9966	µg/mL	Gravimetric
	CAS #	629-97-0				+/-	12.5340	µg/mL	Unstressed
	Purity	99%				+/-	15.0241	µg/mL	Stressed
9	n-Tetracosane (C24)		(Lot MKCN2863)	503.5	µg/mL	+/-	2.9906	µg/mL	Gravimetric
	CAS #	646-31-1				+/-	12.5092	µg/mL	Unstressed
	Purity	99%				+/-	14.9944	µg/mL	Stressed
10	n-Hexacosane (C26)		(Lot MKCD4540)	504.0	µg/mL	+/-	2.9936	µg/mL	Gravimetric
	CAS #	630-01-3				+/-	12.5216	µg/mL	Unstressed
	Purity	99%				+/-	15.0093	µg/mL	Stressed
11	n-Octacosane (C28)		(Lot BCCG0084)	504.5	µg/mL	+/-	2.9966	µg/mL	Gravimetric
	CAS #	630-02-4				+/-	12.5340	µg/mL	Unstressed
	Purity	99%				+/-	15.0241	µg/mL	Stressed
12	n-Triacontane (C30)		(Lot MKCN9321)	505.0	µg/mL	+/-	2.9995	µg/mL	Gravimetric
	CAS #	638-68-6				+/-	12.5465	µg/mL	Unstressed
	Purity	99%				+/-	15.0390	µg/mL	Stressed
13	n-Dotriacontane (C32)		(Lot BCBW0661)	505.0	µg/mL	+/-	2.9995	µg/mL	Gravimetric
	CAS #	544-85-4				+/-	12.5465	µg/mL	Unstressed
	Purity	99%				+/-	15.0390	µg/mL	Stressed
14	n-Tetratriacontane (C34)		(Lot OML4N)	504.5	µg/mL	+/-	2.9966	µg/mL	Gravimetric
	CAS #	14167-59-0				+/-	12.5340	µg/mL	Unstressed
	Purity	99%				+/-	15.0241	µg/mL	Stressed
15	n-Hexatriacontane (C36)		(Lot U25B014)	504.0	µg/mL	+/-	2.9936	µg/mL	Gravimetric
	CAS #	630-06-8				+/-	12.5216	µg/mL	Unstressed
	Purity	99%				+/-	15.0093	µg/mL	Stressed
16	n-Octatriacontane (C38)		(Lot 0000127235)	504.4	µg/mL	+/-	2.9960	µg/mL	Gravimetric
	CAS #	7194-85-6				+/-	12.5316	µg/mL	Unstressed
	Purity	97%				+/-	15.0212	µg/mL	Stressed
17	n-Tetracontane (C40)		(Lot PADGI)	504.7	µg/mL	+/-	2.9978	µg/mL	Gravimetric
	CAS #	4181-95-7				+/-	12.5390	µg/mL	Unstressed
	Purity	98%				+/-	15.0301	µg/mL	Stressed
Solvent:	Hexane								
	CAS #	110-54-3							
	Purity	99%							

Column:

30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:

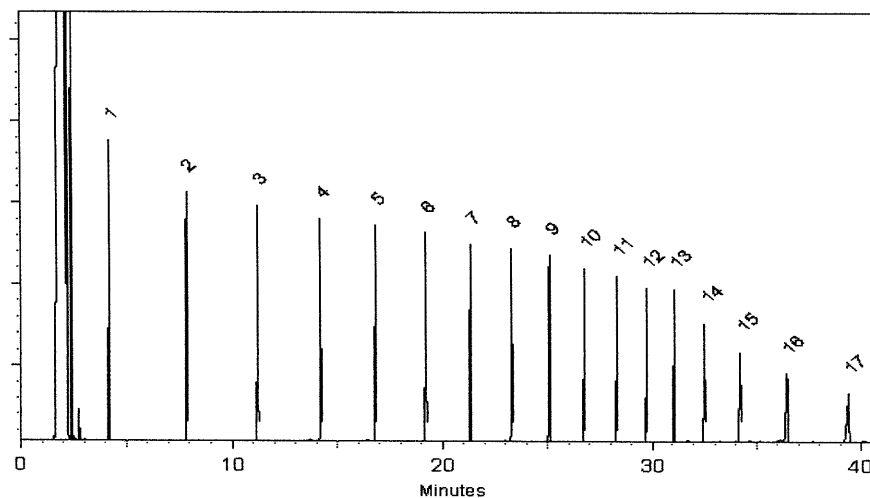
250°C

Det. Temp:

330°C

Det. Type:

FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Brittany Federinko - Operations Tech I

Date Mixed: 29-Jun-2022

Balance: 1128360905

Christie Mills - Operations Tech II - ARM QC

Date Passed: 01-Jul-2022

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/ μ ECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.



5580 Skyline Blvd
Santa Rosa, CA 95403

(707)525-5788
(800)878-7654 Toll Free
(707)545-7901 Fax

Manufacturer's Quality System
Audited & Registered
by TUV USA to ISO 9001:2015

Date Received: _____

Certificate of Analysis

Rev 0

Page 1 of 1

Catalog No.: Lot No.: Storage: Solvent: Exp. Date: Description:
Z-110400-05 514983 ≤ -10 Degrees C Hexane 11/20/2028 TRPH Standard (C8-C40), 500 mg/L, 1 ml
-01

Compound	CAS No.	Purity (%)	Compound Lot No.	Concentration, mg/L
decane (C10)	124-18-5	99.7	415.7.2P	498.5 $\pm$ 6.92
docosane (C22)	629-97-0	98.8	420.9.1P	499.4 $\pm$ 6.93
dodecane (C12)	112-40-3	99.7	416.9.3P	502 $\pm$ 6.97
dotriacontane (C32)	544-85-4	97	425.9.2.2P	499.6 $\pm$ 8.53
eicosane (C20)	112-95-8	99.8	419.7.1P	501 $\pm$ 6.95
hexacosane (C26)	630-01-3	99.3	422.7.2.1P	501 $\pm$ 6.95
hexatriacontane (C36)	630-06-8	98	427.29.1.1P	499.3 $\pm$ 8.53
n-hexadecane (C16)	544-76-3	99.45	368.271.1P	498.7 $\pm$ 6.91
octacosane (C28)	630-02-4	99.1	423.24.1P	500.5 $\pm$ 6.95
n-octadecane (C18)	593-45-3	99.5	418.29.1P	499.5 $\pm$ 6.92
octane (C8)	111-65-9	99.4	385.7.2.1P	498.5 $\pm$ 6.92
octatriacontane (C38)	7194-85-6	95	428.1.2P	500.2 $\pm$ 6.94
tetracontane (C40)	4181-95-7	97	429.7.2P	499.6 $\pm$ 6.93
n-tetracosane (C24)	646-31-1	99.5	421.7.1P	499.5 $\pm$ 6.93
n-tetradecane (C14)	629-59-4	99.3	417.9.1P	500 $\pm$ 6.94
tetratriacontane (C34)	14167-59-0	96.1	426.7.2.2P	499.7 $\pm$ 8.53
triacontane (C30)	638-68-6	99.5	424.7.1.1P	500 $\pm$ 6.94

Let the standard warm to room temperature and sonicate before opening.

Certified By: _____

Andrea Schaible
Chemist

All weights are traceable through N. I. S. T. Test No. 822/264157-00.
Concentration (correct for purity) and uncertainty (95% confidence) values
listed are determined gravimetrically.

*Not a certified value



5580 Skyline Blvd
Santa Rosa, CA 95403

(707)525-5788
(800)878-7654 Toll Free
(707)545-7901 Fax

Manufacturer's Quality System
Audited & Registered
by TUV USA to ISO 9001:2015

Date Received: _____

Certificate of Analysis

Rev 0

Page 1 of 1

Catalog No.: Lot No.: Storage: Solvent: Exp. Date: Description:
Z-110400-05 514983 ≤ -10 Degrees C Hexane 11/20/2028 TRPH Standard (C8-C40), 500 mg/L, 1 ml
-01

Compound	CAS No.	Purity (%)	Compound Lot No.	Concentration, mg/L
decane (C10)	124-18-5	99.7	415.7.2P	498.5 $\pm$ 6.92
docosane (C22)	629-97-0	98.8	420.9.1P	499.4 $\pm$ 6.93
dodecane (C12)	112-40-3	99.7	416.9.3P	502 $\pm$ 6.97
dotriacontane (C32)	544-85-4	97	425.9.2.2P	499.6 $\pm$ 8.53
eicosane (C20)	112-95-8	99.8	419.7.1P	501 $\pm$ 6.95
hexacosane (C26)	630-01-3	99.3	422.7.2.1P	501 $\pm$ 6.95
hexatriacontane (C36)	630-06-8	98	427.29.1.1P	499.3 $\pm$ 8.53
n-hexadecane (C16)	544-76-3	99.45	368.271.1P	498.7 $\pm$ 6.91
octacosane (C28)	630-02-4	99.1	423.24.1P	500.5 $\pm$ 6.95
n-octadecane (C18)	593-45-3	99.5	418.29.1P	499.5 $\pm$ 6.92
octane (C8)	111-65-9	99.4	385.7.2.1P	498.5 $\pm$ 6.92
octatriacontane (C38)	7194-85-6	95	428.1.2P	500.2 $\pm$ 6.94
tetracontane (C40)	4181-95-7	97	429.7.2P	499.6 $\pm$ 6.93
n-tetracosane (C24)	646-31-1	99.5	421.7.1P	499.5 $\pm$ 6.93
n-tetradecane (C14)	629-59-4	99.3	417.9.1P	500 $\pm$ 6.94
tetratriacontane (C34)	14167-59-0	96.1	426.7.2.2P	499.7 $\pm$ 8.53
triacontane (C30)	638-68-6	99.5	424.7.1.1P	500 $\pm$ 6.94

Let the standard warm to room temperature and sonicate before opening.

Certified By: _____

Andrea Schaible
Chemist

All weights are traceable through N. I. S. T. Test No. 822/264157-00.
Concentration (correct for purity) and uncertainty (95% confidence) values
listed are determined gravimetrically.

*Not a certified value



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Certificate of Analysis

Rev 0

Page 1 of 1

Catalog No.: Lot No.: Storage: Solvent: Exp. Date: Description:
Z-110400-05 514983 ≤ -10 Degrees C Hexane 11/20/2028 TRPH Standard (C8-C40), 500 mg/L, 1 ml
-01

Compound	CAS No.	Purity (%)	Compound Lot No.	Concentration, mg/L
decane (C10)	124-18-5	99.7	415.7.2P	498.5 $\pm$ 6.92
docosane (C22)	629-97-0	98.8	420.9.1P	499.4 $\pm$ 6.93
dodecane (C12)	112-40-3	99.7	416.9.3P	502 $\pm$ 6.97
dotriacontane (C32)	544-85-4	97	425.9.2.2P	499.6 $\pm$ 8.53
eicosane (C20)	112-95-8	99.8	419.7.1P	501 $\pm$ 6.95
hexacosane (C26)	630-01-3	99.3	422.7.2.1P	501 $\pm$ 6.95
hexatriacontane (C36)	630-06-8	98	427.29.1.1P	499.3 $\pm$ 8.53
n-hexadecane (C16)	544-76-3	99.45	368.271.1P	498.7 $\pm$ 6.91
octacosane (C28)	630-02-4	99.1	423.24.1P	500.5 $\pm$ 6.95
n-octadecane (C18)	593-45-3	99.5	418.29.1P	499.5 $\pm$ 6.92
octane (C8)	111-65-9	99.4	385.7.2.1P	498.5 $\pm$ 6.92
octatriacontane (C38)	7194-85-6	95	428.1.2P	500.2 $\pm$ 6.94
tetracontane (C40)	4181-95-7	97	429.7.2P	499.6 $\pm$ 6.93
n-tetracosane (C24)	646-31-1	99.5	421.7.1P	499.5 $\pm$ 6.93
n-tetradecane (C14)	629-59-4	99.3	417.9.1P	500 $\pm$ 6.94
tetratriacontane (C34)	14167-59-0	96.1	426.7.2.2P	499.7 $\pm$ 8.53
triacontane (C30)	638-68-6	99.5	424.7.1.1P	500 $\pm$ 6.94

Let the standard warm to room temperature and sonicate before opening.

Certified By: _____

Andrea Schaible
Chemist

All weights are traceable through N. I. S. T. Test No. 822/264157-00.
Concentration (correct for purity) and uncertainty (95% confidence) values
listed are determined gravimetrically.

*Not a certified value



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by TUV USA to ISO 9001:2015

Date Received: _____

Certificate of Analysis

Rev 0

Page 1 of 1

Catalog No.: Lot No.: Storage: Solvent: Exp. Date: Description:
Z-110400-05 514983 ≤ -10 Degrees C Hexane 11/20/2028 TRPH Standard (C8-C40), 500 mg/L, 1 ml
-01

Compound	CAS No.	Purity (%)	Compound Lot No.	Concentration, mg/L
decane (C10)	124-18-5	99.7	415.7.2P	498.5 $\pm$ 6.92
docosane (C22)	629-97-0	98.8	420.9.1P	499.4 $\pm$ 6.93
dodecane (C12)	112-40-3	99.7	416.9.3P	502 $\pm$ 6.97
dotriacontane (C32)	544-85-4	97	425.9.2.2P	499.6 $\pm$ 8.53
eicosane (C20)	112-95-8	99.8	419.7.1P	501 $\pm$ 6.95
hexacosane (C26)	630-01-3	99.3	422.7.2.1P	501 $\pm$ 6.95
hexatriacontane (C36)	630-06-8	98	427.29.1.1P	499.3 $\pm$ 8.53
n-hexadecane (C16)	544-76-3	99.45	368.271.1P	498.7 $\pm$ 6.91
octacosane (C28)	630-02-4	99.1	423.24.1P	500.5 $\pm$ 6.95
n-octadecane (C18)	593-45-3	99.5	418.29.1P	499.5 $\pm$ 6.92
octane (C8)	111-65-9	99.4	385.7.2.1P	498.5 $\pm$ 6.92
octatriacontane (C38)	7194-85-6	95	428.1.2P	500.2 $\pm$ 6.94
tetracontane (C40)	4181-95-7	97	429.7.2P	499.6 $\pm$ 6.93
n-tetracosane (C24)	646-31-1	99.5	421.7.1P	499.5 $\pm$ 6.93
n-tetradecane (C14)	629-59-4	99.3	417.9.1P	500 $\pm$ 6.94
tetratriacontane (C34)	14167-59-0	96.1	426.7.2.2P	499.7 $\pm$ 8.53
triacontane (C30)	638-68-6	99.5	424.7.1.1P	500 $\pm$ 6.94

Let the standard warm to room temperature and sonicate before opening.

Certified By: _____

Andrea Schaible
Chemist

All weights are traceable through N. I. S. T. Test No. 822/264157-00.
Concentration (correct for purity) and uncertainty (95% confidence) values
listed are determined gravimetrically.

P 13215
↓
P 13224

AJ
01/31/24

*Not a certified value

ABSOLUTE STANDARDS, INC.

ISO - 17034



Certificate of Analysis



Certified Reference Material (CRM)

Conformance: The "Certificate of Analysis" is applicable for CRM's, fulfilling the requirements in the current version of: ISO 17034.

Health & Safety: See the attached SDS & Certified Weight Report before use.

Intended Use: This Certified Reference Material (CRM) is intended primarily for use in the characterization of unknowns and the establishment of analyzer or instrument response factors by qualified personnel. Typical instrumental organic assays include: GC & LC, and inorganic assays include: ICP & AA. This product is for laboratory use only.

Characterization Values: In production, gravimetric/volumetric readings are certified to be within $\pm 0.5\%$ of the stated value & are valid between 18 °C & 30 °C. The measured characterization of uncertainty can be found on the Certified Weight Report. All product weighings are performed on an analytical balance that is calibrated to NIST Traceable standard weights & certified by the manufacturer. The volumetric glassware used is Class "A" type & conforms to ASTM E-288 unless otherwise stated. The solvents & compounds used are of the highest practical purity & typically meet or exceed ACS Reagent Grade & ACS Standards Grade specifications. The expanded uncertainty field on Certified Wt. Report represents CRM uncertainty as described in ISO 17034.

Homogeneity: Uncertainties that are due to the analytical procedure(s) are within $\pm 5\%$ unless specifically stated on the Certified Wt. Report.

Verification: Uncertainties that are due to the analytical procedure(s) are within $\pm 5\%$ unless specifically stated on the Certified Wt. Report.

Stability: Uncertainties for short-term stability are determined in accordance with ISO 17034. Long-term stability is determined in accordance with ISO 17034. The shelf life is limited by the stated expiration for each product. Expiration dates and additional technical information can be found on the Certified Weight Report and on the product label.

Uncertainty: UCRM is the expanded uncertainty which utilizes a $K = 2$ (coverage factor of 2), in accordance with ISO 17034 as listed above (Characterization, Homogeneity, Verification, and Stability).

Purity & Identity: Organic solutions are typically formulated from neat materials whose purity & identity have been characterized by GC-MSD & LC-PDA techniques with comparison to a NIST Traceable library of mass spectra when available. Additional characterization techniques may include but are not limited to: refractive index measurements of liquids, melting point measurements of solids, & GC-FID, ECD, PID, ELCD, LC-PDA measurements for purity. Inorganic solutions & neats are typically formulated from materials whose purity & identity have been characterized by ICPMS with comparison to a NIST SRM® when available. Additional characterization techniques may include but are not limited to: titrimetry, and densitometry.

Storage: Sealed ampules and other containers should be stored in the dark and at temperatures indicated on the Certified Weight Report or product label. Certification by Absolute Standards, Inc. is typically valid for 3 years from the date of manufacture. Each product will show its own expiration date as the limit of certification. Certified values are not applicable to opened ampules or for any materials stored in re-sealable containers. Please see the "Certified Weight Report" for specific values and any exceptions.

Usage: Ampules & bottles should be brought to room temperature (18 to 30 °C) before opening. Sonication may be required for high concentration solutions or solutions that may precipitate during storage. After opening, care should be exercised to avoid concentration changes owing to evaporation of the solvent or essential components. We recommend that a suitable re-sealable container be available before opening an ampule to decant the standard for short-term storage and use.

Minimum Sample Size: 0.5 uL for analytical applications.

Legal Notice: Warranty of products are as described when shipped. No warranty as to fitness for any particular application is expressed or implied. Errant shipments and/or quality claims must be made within 10 days of receipt. Liability is limited solely to the replacement of the product or refund of purchase price.

Certifying Officer: Stephen J. Arpie, M.S., Director General

Page 1 of 2



Absolute Standards, Inc. • 44 Rossotto Drive • Hamden, CT 06514
Voice: 800-368-1131 • Fax: 800-410-2577 • eMail: StephenArpie@AbsoluteStandards.com
Document Identification: Certificate of Analysis Rev 14, Date Issued: 05/30/2019



ABSOLUTE STANDARDS, INC.

ISO - 17034

Understanding the Certified Weight Report

Each Certified Reference Material (CRM) is supported by a Certified Weight Report. Assigned values for concentrations and associated uncertainties are based upon NIST traceable masses & volumes used in production.

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ISO 17034 Accredited
Scope: http://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT

Part # 10009R
Lot # 070716
Shelf Life Description: CLP Priority Pollutant Internal Standards
GC/MS Calibration - 6 components
070721
Expiration Date: Ambient (20 °C)
Recommended Storage: 4000
Nominal Concentration (µg/mL): 822-275872-11
NIST Test ID#: 5E-05 Balance Uncertainty
0.058 Mass Uncertainty

Solvent(s): Methylene chloride
Lot# 78782

Formulated By: Paul Barron
Reviewed By: Pedro L. Rentes

070716
070716

Weight(s) shown below were combined and diluted to (mL): 500.0

Compound	SMW	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight (µg)	Actual Weight (µg)	Actual Conc (µg/mL)	Expanded Uncertainty (µg/mL)	CAS#	MSDS Information (Solvent Safety Info. On Attached pg.)	OSHA PEL (TWA)	LD50
1. 1,4-Dichlorobenzene-d4	118	PR-1845M07287CB1	4000	98	0.2	2.04093	2.04335	4004.7	15.4	2055-02-1	N/A	N/A	or-rat 500mg/kg
2. Naphthalene-d8	223	PR-2339M031612HP1	4000	99	0.2	2.02032	2.02084	4001.0	15.2	1146-85-2	10 ppm (50mg/m3/8h)	N/A	or-rat 400mg/kg
3. Acenaphthene-d10	2	PR-25444	4000	99	0.2	2.02032	2.02245	4004.2	15.2	15067-28-2	N/A	N/A	or-rat 500mg/kg
4. Phenanthrene-d10	248	PR-2305M081711PM1	4000	98	0.2	2.04093	2.04135	4000.8	15.4	1517-25-2	N/A	N/A	N/A
5. Chrysene-d12	92	I-19290	4000	98	0.2	2.04093	2.04150	4001.3	15.4	1719-03-5	N/A	N/A	N/A
6. Perylene-d12	247	PR-24113	4000	98	0.2	2.04093	2.04155	4001.2	15.4	1503-58-3	N/A	N/A	N/A

Run 35, "P10009R L070716 [4000µg/mL in MeCl2]"

Run Length: 40.00 min, 23900 points at 10 points/second.
Created: Sat, Jul 9, 2016 at 1:54:53 PM.
Sampled: Sequence "070716-GC/MS", Method "GC-MS".
Analyzed using Method "GC-MS".

Comments:
GC-MS Analysis by Melissa Siciric
Column ID SPB-5 30 meter x 0.53mm x 1.5um Film Thickness.
Flow rates: Total Flow = 300 mL/min, Helium (carrier) = 0.5 mL, Helium (make-up) = 25 mL.
Hydrogen (detector) = 30 mL, Air (detector) = 300 mL, Oven Temp 1 = 50°C (1 min).
Rise = 10°C/min, Oven Temp 2 = 300°C (14 min), Total Run Time = 40 Minutes, Injector Temp = 250°C.
FID Temp = 300°C, FID Signal = sData Channel 1.
Gas Chromatograph = HP 5890, Auto Sampler = HP 7673, Standard Injection = 0.5 µL, Range = 4

Peak No. Name FID RT (min)

1	1,4-Dichlorobenzene-d4	8.34
2	Naphthalene-d8	8.98
3	Acenaphthene-d10	12.97
4	Phenanthrene-d10	16.37
5	Chrysene-d12	22.62
6	Perylene-d12	25.75

Printed: 5/8/2019, 12:55:50 PM

Formulator
Reviewer

Actual
Concentration

Uncertainty
Values

Health &
Safety

3rd Party
Comparison

For More Information, Contact:

StephenArpie@AbsoluteStandards.com

Page 2 of 2



CERTIFIED WEIGHT REPORT

Part Number: **72072**
Lot Number: **101122**
Description: **n-Tetracosane-d50**

Solvent(s): **Methylene chloride**
Lot#: **105345**

<i>Prashant Chauhan</i>		101122
Formulated By:	Prashant Chauhan	DATE
<i>Pedro L. Rentas</i>		101122
Reviewed By:	Pedro L. Rentas	DATE

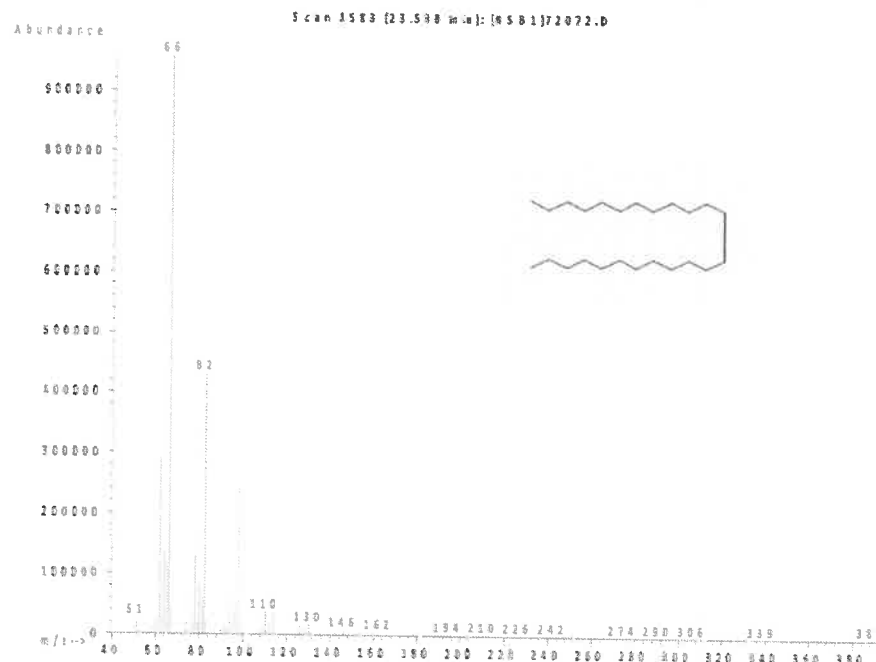
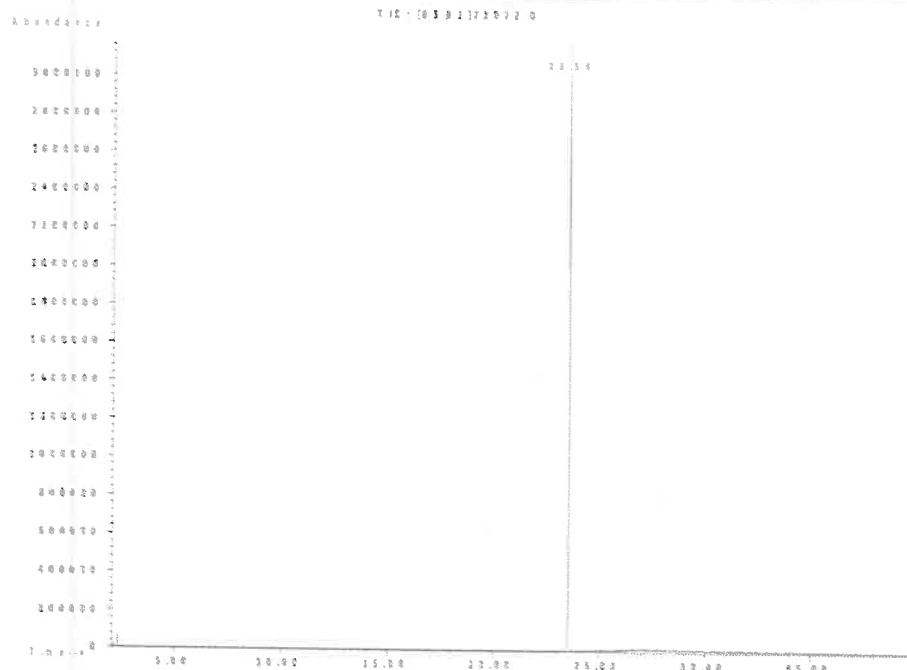
P13477 } x.p.
↓
P13496 } 07/24/24

Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UTB**

Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Assay (%)	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.)		
											CAS#	OSHA PEL (TWA)	LD50
1. n-Tetracosane-d50	2072	PR-26606	1000	98.7	0.2	99.0	0.20471	0.20482	1000.6	4.1	16416-32-3	N/A	N/A

Method GC8MSD-3.M: Column:SPB-5 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (9min.), Rate = 10°C/min., Injector B= 250°C, Detector B = 275°C, Split Ratio = 100:1, Scan Rate = 2. Analysis performed by: Candice Warren.



- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

ABSOLUTE STANDARDS, INC.

ISO - 17034



Certificate of Analysis



Certified Reference Material (CRM)

Conformance: The "Certificate of Analysis" is applicable for CRM's, fulfilling the requirements in the current version of: ISO 17034.

Health & Safety: See the attached SDS & Certified Weight Report before use.

Intended Use: This Certified Reference Material (CRM) is intended primarily for use in the characterization of unknowns and the establishment of analyzer or instrument response factors by qualified personnel. Typical instrumental organic assays include: GC & LC, and inorganic assays include: ICP & AA. This product is for laboratory use only.

Characterization Values: In production, gravimetric/volumetric readings are certified to be within $\pm 0.5\%$ of the stated value & are valid between 18 °C & 30 °C. The measured characterization of uncertainty can be found on the Certified Weight Report. All product weighings are performed on an analytical balance that is calibrated to NIST Traceable standard weights & certified by the manufacturer. The volumetric glassware used is Class "A" type & conforms to ASTM E-288 unless otherwise stated. The solvents & compounds used are of the highest practical purity & typically meet or exceed ACS Reagent Grade & ACS Standards Grade specifications. The expanded uncertainty field on Certified Wt. Report represents CRM uncertainty as described in ISO 17034.

Homogeneity: Uncertainties that are due to the analytical procedure(s) are within $\pm 5\%$ unless specifically stated on the Certified Wt. Report.

Verification: Uncertainties that are due to the analytical procedure(s) are within $\pm 5\%$ unless specifically stated on the Certified Wt. Report.

Stability: Uncertainties for short-term stability are determined in accordance with ISO 17034. Long-term stability is determined in accordance with ISO 17034. The shelf life is limited by the stated expiration for each product. Expiration dates and additional technical information can be found on the Certified Weight Report and on the product label.

Uncertainty: UCRM is the expanded uncertainty which utilizes a $K = 2$ (coverage factor of 2), in accordance with ISO 17034 as listed above (Characterization, Homogeneity, Verification, and Stability).

Purity & Identity: Organic solutions are typically formulated from neat materials whose purity & identity have been characterized by GC-MSD & LC-PDA techniques with comparison to a NIST Traceable library of mass spectra when available. Additional characterization techniques may include but are not limited to: refractive index measurements of liquids, melting point measurements of solids, & GC-FID, ECD, PID, ELCD, LC-PDA measurements for purity. Inorganic solutions & neats are typically formulated from materials whose purity & identity have been characterized by ICPMS with comparison to a NIST SRM® when available. Additional characterization techniques may include but are not limited to: titrimetry, and densitometry.

Storage: Sealed ampules and other containers should be stored in the dark and at temperatures indicated on the Certified Weight Report or product label. Certification by Absolute Standards, Inc. is typically valid for 3 years from the date of manufacture. Each product will show its own expiration date as the limit of certification. Certified values are not applicable to opened ampules or for any materials stored in re-sealable containers. Please see the "Certified Weight Report" for specific values and any exceptions.

Usage: Ampules & bottles should be brought to room temperature (18 to 30 °C) before opening. Sonication may be required for high concentration solutions or solutions that may precipitate during storage. After opening, care should be exercised to avoid concentration changes owing to evaporation of the solvent or essential components. We recommend that a suitable re-sealable container be available before opening an ampule to decant the standard for short-term storage and use.

Minimum Sample Size: 0.5 uL for analytical applications.

Legal Notice: Warranty of products are as described when shipped. No warranty as to fitness for any particular application is expressed or implied. Errant shipments and/or quality claims must be made within 10 days of receipt. Liability is limited solely to the replacement of the product or refund of purchase price.

Certifying Officer: Stephen J. Arpie, M.S., Director General

Page 1 of 2



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Voice: 800-368-1131 • Fax: 800-410-2577 • eMail: StephenArpie@AbsoluteStandards.com
Document Identification: Certificate of Analysis Rev 14, Date Issued: 05/30/2019



ABSOLUTE STANDARDS, INC.

ISO - 17034

Understanding the Certified Weight Report

Each Certified Reference Material (CRM) is supported by a Certified Weight Report. Assigned values for concentrations and associated uncertainties are based upon NIST traceable masses & volumes used in production.

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ISO 17034 Accredited
Scope: http://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT

Part # 10009R
Lot # 070716
Shelf Life Description: CLP Priority Pollutant Internal Standards
GC/MS Calibration - 6 components
070721
Expiration Date: Ambient (20 °C)
Recommended Storage: 4000
Nominal Concentration (µg/mL): 822-275872-11
NIST Test ID#: 5E-05 Balance Uncertainty
0.058 Mass Uncertainty

Solvent(s): Methylene chloride
Lot# 78782

Formulated By: Paul Barron
Reviewed By: Pedro L. Rentes

070716
070716

Weight(s) shown below were combined and diluted to (mL): 500.0

Compound	SMW	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight (µg)	Actual Weight (µg)	Actual Conc (µg/mL)	Expanded Uncertainty (µg/mL)	CAS#	MSDS Information (Solvent Safety Info. On Attached pg.)	OSHA PEL (TWA)	LD50
1. 1,4-Dichlorobenzene-d4	118	PR-1845M07287CB1	4000	98	0.2	2.04093	2.04335	4004.7	15.4	2055-02-1	N/A	en-ra 500mg/kg	
2. Naphthalene-d8	223	PR-2339M031612HP1	4000	99	0.2	2.02032	2.02084	4001.0	15.2	1146-85-2	10 ppm (50mg/m3/8h)	en-ra 400mg/kg	
3. Acenaphthene-d10	2	PR-25444	4000	99	0.2	2.02032	2.02245	4004.2	15.2	15067-28-2	N/A	en-ra 500mg/kg	
4. Phenanthrene-d10	248	PR-2305M081711PM1	4000	98	0.2	2.04093	2.04135	4000.8	15.4	1517-25-2	N/A	N/A	
5. Chrysene-d12	92	I-19290	4000	98	0.2	2.04093	2.04150	4001.3	15.4	1719-03-5	N/A	N/A	
6. Perylene-d12	247	PR-24113	4000	98	0.2	2.04093	2.04155	4001.2	15.4	1503-58-3	N/A	N/A	

Run 35, "P10009R L070716 [4000µg/mL in MeCl2]"
Run Length: 40.00 min, 23900 points at 10 points/second.
Created: Sat, Jul 9, 2016 at 1:54:53 PM.
Sampled: Sequence "070716-GC/MS", Method "GC-MS".
Analyzed using Method "GC-MS".

Comments:
GC-MS Analysis by Melissa Siciric
Column ID SPB-5 30 meter x 0.53mm x 1.5um Film Thickness.
Flow rates: Total Flow = 300 mL/min, Helium (carrier) = 0.5 mL, Helium (make-up) = 25 mL.
Hydrogen (detector) = 30 mL, Air (detector) = 300 mL, Oven Temp 1 = 50°C (1 min).
Rise = 10°C/min, Oven Temp 2 = 300°C (14 min). Total Run Time = 40 Minutes. Injector Temp = 250°C.
FID Temp = 300°C, FID Signal = aDaq Channel 1.
Gas Chromatograph = HP 5890, Auto Sampler = HP 7673, Standard Injection = 0.5 µL, Range = 4

Peak No. Name FID RT (min)

1	1,4-Dichlorobenzene-d4	6.34
2	Naphthalene-d8	8.98
3	Acenaphthene-d10	12.97
4	Phenanthrene-d10	16.37
5	Chrysene-d12	22.62
6	Perylene-d12	25.75

Printed: 5/8/2019, 12:55:50 PM

Formulator
Reviewer

Actual
Concentration

Uncertainty
Values

Health &
Safety

3rd Party
Comparison

For More Information, Contact:

StephenArpie@AbsoluteStandards.com

Page 2 of 2



CERTIFIED WEIGHT REPORT

Part Number: **72072**
Lot Number: **101122**
Description: **n-Tetracosane-d50**

Solvent(s): **Methylene chloride**
Lot#: **105345**

<i>Prashant Chauhan</i>		101122
Formulated By:	Prashant Chauhan	DATE
<i>Pedro L. Rentas</i>		101122
Reviewed By:	Pedro L. Rentas	DATE

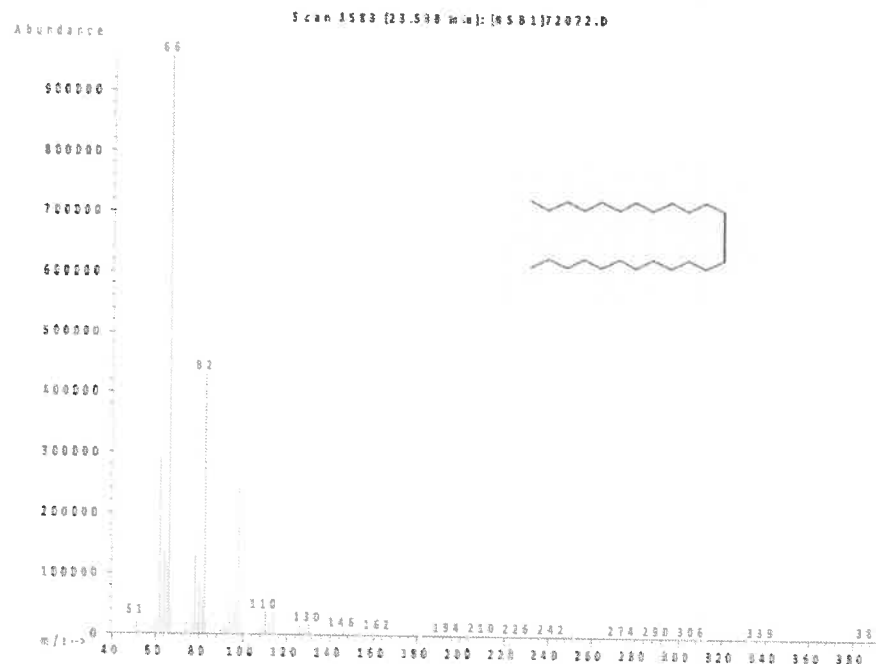
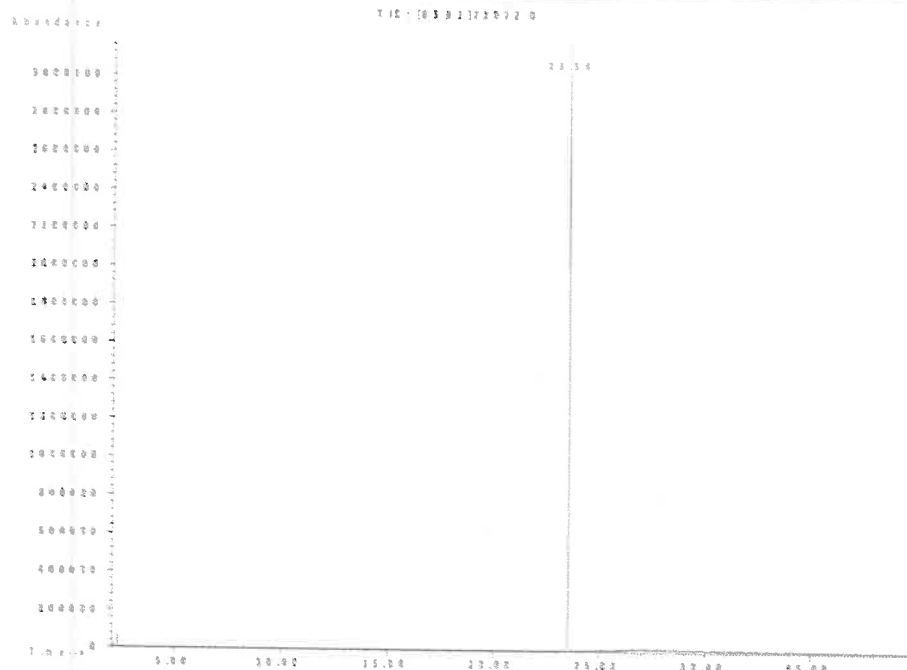
P13477 } x.p.
↓
P13496 } 07/24/24

Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UTB**

Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Assay (%)	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.)		
											CAS#	OSHA PEL (TWA)	LD50
1. n-Tetracosane-d50	2072	PR-26606	1000	98.7	0.2	99.0	0.20471	0.20482	1000.6	4.1	16416-32-3	N/A	N/A

Method GC8MSD-3.M: Column:SPB-5 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (9min.), Rate = 10°C/min., Injector B= 250°C, Detector B = 275°C, Split Ratio = 100:1, Scan Rate = 2. Analysis performed by: Candice Warren.



- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

ABSOLUTE STANDARDS, INC.

ISO - 17034



Certificate of Analysis



Certified Reference Material (CRM)

Conformance: The "Certificate of Analysis" is applicable for CRM's, fulfilling the requirements in the current version of: ISO 17034.

Health & Safety: See the attached SDS & Certified Weight Report before use.

Intended Use: This Certified Reference Material (CRM) is intended primarily for use in the characterization of unknowns and the establishment of analyzer or instrument response factors by qualified personnel. Typical instrumental organic assays include: GC & LC, and inorganic assays include: ICP & AA. This product is for laboratory use only.

Characterization Values: In production, gravimetric/volumetric readings are certified to be within $\pm 0.5\%$ of the stated value & are valid between 18 °C & 30 °C. The measured characterization of uncertainty can be found on the Certified Weight Report. All product weighings are performed on an analytical balance that is calibrated to NIST Traceable standard weights & certified by the manufacturer. The volumetric glassware used is Class "A" type & conforms to ASTM E-288 unless otherwise stated. The solvents & compounds used are of the highest practical purity & typically meet or exceed ACS Reagent Grade & ACS Standards Grade specifications. The expanded uncertainty field on Certified Wt. Report represents CRM uncertainty as described in ISO 17034.

Homogeneity: Uncertainties that are due to the analytical procedure(s) are within $\pm 5\%$ unless specifically stated on the Certified Wt. Report.

Verification: Uncertainties that are due to the analytical procedure(s) are within $\pm 5\%$ unless specifically stated on the Certified Wt. Report.

Stability: Uncertainties for short-term stability are determined in accordance with ISO 17034. Long-term stability is determined in accordance with ISO 17034. The shelf life is limited by the stated expiration for each product. Expiration dates and additional technical information can be found on the Certified Weight Report and on the product label.

Uncertainty: UCRM is the expanded uncertainty which utilizes a $K = 2$ (coverage factor of 2), in accordance with ISO 17034 as listed above (Characterization, Homogeneity, Verification, and Stability).

Purity & Identity: Organic solutions are typically formulated from neat materials whose purity & identity have been characterized by GC-MSD & LC-PDA techniques with comparison to a NIST Traceable library of mass spectra when available. Additional characterization techniques may include but are not limited to: refractive index measurements of liquids, melting point measurements of solids, & GC-FID, ECD, PID, ELCD, LC-PDA measurements for purity. Inorganic solutions & neats are typically formulated from materials whose purity & identity have been characterized by ICPMS with comparison to a NIST SRM® when available. Additional characterization techniques may include but are not limited to: titrimetry, and densitometry.

Storage: Sealed ampules and other containers should be stored in the dark and at temperatures indicated on the Certified Weight Report or product label. Certification by Absolute Standards, Inc. is typically valid for 3 years from the date of manufacture. Each product will show its own expiration date as the limit of certification. Certified values are not applicable to opened ampules or for any materials stored in re-sealable containers. Please see the "Certified Weight Report" for specific values and any exceptions.

Usage: Ampules & bottles should be brought to room temperature (18 to 30 °C) before opening. Sonication may be required for high concentration solutions or solutions that may precipitate during storage. After opening, care should be exercised to avoid concentration changes owing to evaporation of the solvent or essential components. We recommend that a suitable re-sealable container be available before opening an ampule to decant the standard for short-term storage and use.

Minimum Sample Size: 0.5 uL for analytical applications.

Legal Notice: Warranty of products are as described when shipped. No warranty as to fitness for any particular application is expressed or implied. Errant shipments and/or quality claims must be made within 10 days of receipt. Liability is limited solely to the replacement of the product or refund of purchase price.

Certifying Officer: Stephen J. Arpie, M.S., Director General

Page 1 of 2



Absolute Standards, Inc. • 44 Rossotto Drive • Hamden, CT 06514
Voice: 800-368-1131 • Fax: 800-410-2577 • eMail: StephenArpie@AbsoluteStandards.com
Document Identification: Certificate of Analysis Rev 14, Date Issued: 05/30/2019



ABSOLUTE STANDARDS, INC.

ISO - 17034



Understanding the Certified Weight Report



Each Certified Reference Material (CRM) is supported by a Certified Weight Report. Assigned values for concentrations and associated uncertainties are based upon NIST traceable masses & volumes used in production.

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ISO 17034 Accredited
Scope: http://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT

Part # 10009R
Lot # 070716
Shelf Life Description: CLP Priority Pollutant Internal Standards
GC/MS Calibration - 6 components
070721
Expiration Date: Ambient (20 °C)
Recommended Storage: 4000
Nominal Concentration (µg/mL): 822-275872-11
NIST Test ID#: 5E-05 Balance Uncertainty
0.058 Mass Uncertainty

Solvent(s): Methylene chloride
Lot# 78782

Formulated By: Paul Barron
Reviewed By: Pedro L. Rentes

070716
070716

Weight(s) shown below were combined and diluted to (mL): 500.0

Compound	SMW	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight (µg)	Actual Weight (µg)	Actual Conc (µg/mL)	Expanded Uncertainty (µg/mL)	MSDS Information (Solvent Safety Info. On Attached pg.)	CAS#	OSHA PEL (TWA)	LD50
1. 1,4-Dichlorobenzene-d4	118	PR-1845M07287CB1	4000	98	0.2	2.04093	2.04335	4004.7	15.4	2055-02-1	N/A	N/A	or-rat 500mg/kg
2. Naphthalene-d8	223	PR-2339M031612HP1	4000	99	0.2	2.02032	2.02084	4001.0	15.2	1146-85-2	10 ppm (50mg/m3)H	N/A	or-rat 400mg/kg
3. Acenaphthene-d10	2	PR-25444	4000	99	0.2	2.02032	2.02245	4004.2	15.2	15067-28-2	N/A	N/A	or-rat 500mg/kg
4. Phenanthrene-d10	248	PR-2305M081711PM1	4000	98	0.2	2.04093	2.04136	4000.8	15.4	1517-25-2	N/A	N/A	N/A
5. Chrysene-d12	92	I-19290	4000	98	0.2	2.04093	2.04159	4001.3	15.4	1719-03-5	N/A	N/A	N/A
6. Perylene-d12	247	PR-24113	4000	98	0.2	2.04093	2.04156	4001.2	15.4	1503-58-3	N/A	N/A	N/A

Run 35, "P10009R L070716 [4000µg/mL in MeCl2]"

Run Length: 40.00 min, 23900 points at 10 points/second.
Created: Sat, Jul 9, 2016 at 1:54:53 PM.
Sampled: Sequence "070716-GC/MS", Method "GC-MS".
Analyzed using Method "GC-MS".

Comments:
GC-MS Analysis by Melissa Siciric
Column ID SPB-5 30 meter x 0.53mm x 1.5um Film Thickness.
Flow rates: Total Flow = 300 mL/min, Helium (carrier) = 0.5 mL, Helium (make-up) = 25 mL.
Hydrogen (detector) = 30 mL, Air (detector) = 300 mL, Oven Temp 1 = 50°C (1 min).
Rise = 10°C/min, Oven Temp 2 = 300°C (14 min), Total Run Time = 40 Minutes, Injector Temp = 250°C.
FID Temp = 300°C, FID Signal = sData Channel 1.
Gas Chromatograph = HP 5890, Auto Sampler = HP 7673, Standard Injection = 0.5 µL, Range = 4

Peak No. Name FID RT (min)

1	1,4-Dichlorobenzene-d4	6.34
2	Naphthalene-d8	8.98
3	Acenaphthene-d10	12.97
4	Phenanthrene-d10	16.37
5	Chrysene-d12	22.62
6	Perylene-d12	25.75

Printed: 5/8/2019, 12:55:50 PM

Formulator
Reviewer

Actual
Concentration
Uncertainty
Values

Health &
Safety

3rd Party
Comparison

For More Information, Contact:

StephenArpie@AbsoluteStandards.com

Page 2 of 2



CERTIFIED WEIGHT REPORT

Part Number: **72072**
Lot Number: **101122**
Description: **n-Tetracosane-d50**

Solvent(s): **Methylene chloride**
Lot#: **105345**

<i>Prashant Chauhan</i>		101122
Formulated By:	Prashant Chauhan	DATE
<i>Pedro L. Rentas</i>		101122
Reviewed By:	Pedro L. Rentas	DATE

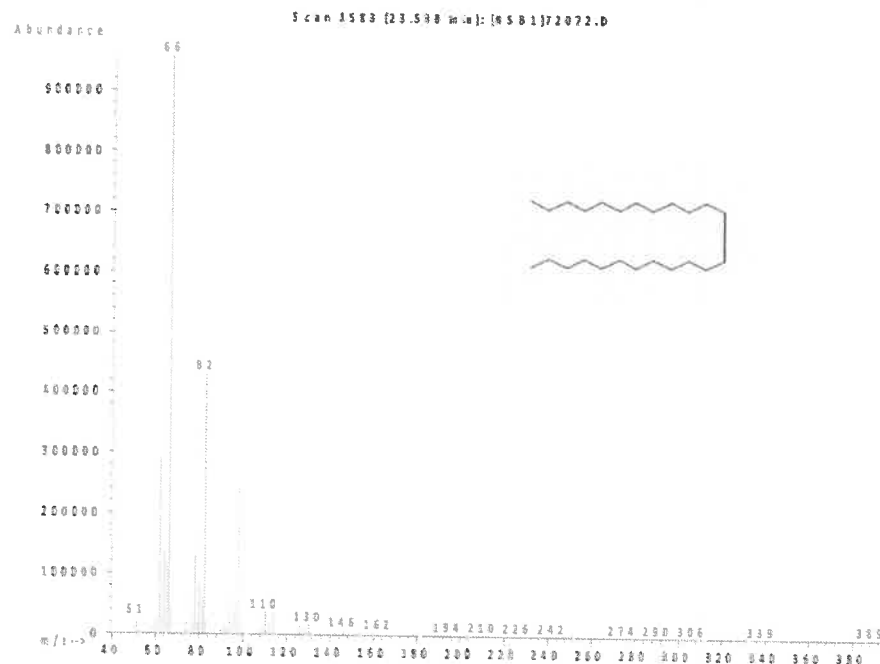
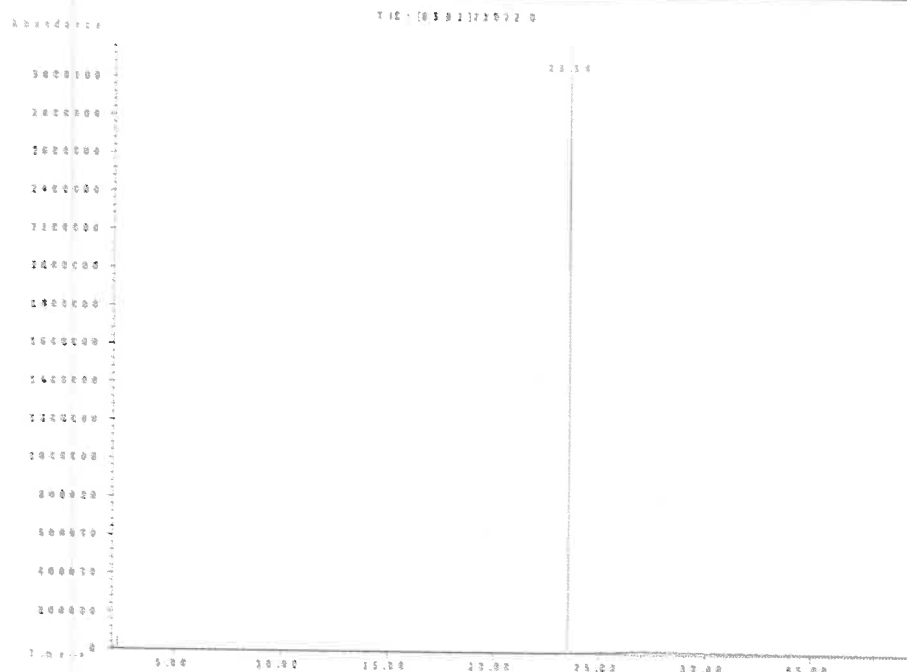
*P13477 } x.p.
↓
P13496 } 07/24/24*

Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UTB**

Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Assay (%)	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.)		
											CAS#	OSHA PEL (TWA)	LD50
1. n-Tetracosane-d50	2072	PR-26606	1000	98.7	0.2	99.0	0.20471	0.20482	1000.6	4.1	16416-32-3	N/A	N/A

Method GC8MSD-3.M: Column:SPB-5 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (9min.), Rate = 10°C/min., Injector B= 250°C, Detector B = 275°C, Split Ratio = 100:1, Scan Rate = 2. Analysis performed by: Candice Warren.



- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

ABSOLUTE STANDARDS, INC.

ISO - 17034



Certificate of Analysis



Certified Reference Material (CRM)

Conformance: The "Certificate of Analysis" is applicable for CRM's, fulfilling the requirements in the current version of: ISO 17034.

Health & Safety: See the attached SDS & Certified Weight Report before use.

Intended Use: This Certified Reference Material (CRM) is intended primarily for use in the characterization of unknowns and the establishment of analyzer or instrument response factors by qualified personnel. Typical instrumental organic assays include: GC & LC, and inorganic assays include: ICP & AA. This product is for laboratory use only.

Characterization Values: In production, gravimetric/volumetric readings are certified to be within $\pm 0.5\%$ of the stated value & are valid between 18 °C & 30 °C. The measured characterization of uncertainty can be found on the Certified Weight Report. All product weighings are performed on an analytical balance that is calibrated to NIST Traceable standard weights & certified by the manufacturer. The volumetric glassware used is Class "A" type & conforms to ASTM E-288 unless otherwise stated. The solvents & compounds used are of the highest practical purity & typically meet or exceed ACS Reagent Grade & ACS Standards Grade specifications. The expanded uncertainty field on Certified Wt. Report represents CRM uncertainty as described in ISO 17034.

Homogeneity: Uncertainties that are due to the analytical procedure(s) are within $\pm 5\%$ unless specifically stated on the Certified Wt. Report.

Verification: Uncertainties that are due to the analytical procedure(s) are within $\pm 5\%$ unless specifically stated on the Certified Wt. Report.

Stability: Uncertainties for short-term stability are determined in accordance with ISO 17034. Long-term stability is determined in accordance with ISO 17034. The shelf life is limited by the stated expiration for each product. Expiration dates and additional technical information can be found on the Certified Weight Report and on the product label.

Uncertainty: UCRM is the expanded uncertainty which utilizes a $K = 2$ (coverage factor of 2), in accordance with ISO 17034 as listed above (Characterization, Homogeneity, Verification, and Stability).

Purity & Identity: Organic solutions are typically formulated from neat materials whose purity & identity have been characterized by GC-MSD & LC-PDA techniques with comparison to a NIST Traceable library of mass spectra when available. Additional characterization techniques may include but are not limited to: refractive index measurements of liquids, melting point measurements of solids, & GC-FID, ECD, PID, ELCD, LC-PDA measurements for purity. Inorganic solutions & neats are typically formulated from materials whose purity & identity have been characterized by ICPMS with comparison to a NIST SRM® when available. Additional characterization techniques may include but are not limited to: titrimetry, and densitometry.

Storage: Sealed ampules and other containers should be stored in the dark and at temperatures indicated on the Certified Weight Report or product label. Certification by Absolute Standards, Inc. is typically valid for 3 years from the date of manufacture. Each product will show its own expiration date as the limit of certification. Certified values are not applicable to opened ampules or for any materials stored in re-sealable containers. Please see the "Certified Weight Report" for specific values and any exceptions.

Usage: Ampules & bottles should be brought to room temperature (18 to 30 °C) before opening. Sonication may be required for high concentration solutions or solutions that may precipitate during storage. After opening, care should be exercised to avoid concentration changes owing to evaporation of the solvent or essential components. We recommend that a suitable re-sealable container be available before opening an ampule to decant the standard for short-term storage and use.

Minimum Sample Size: 0.5 uL for analytical applications.

Legal Notice: Warranty of products are as described when shipped. No warranty as to fitness for any particular application is expressed or implied. Errant shipments and/or quality claims must be made within 10 days of receipt. Liability is limited solely to the replacement of the product or refund of purchase price.

Certifying Officer: Stephen J. Arpie, M.S., Director General

Page 1 of 2



Absolute Standards, Inc. • 44 Rossotto Drive • Hamden, CT 06514
Voice: 800-368-1131 • Fax: 800-410-2577 • eMail: StephenArpie@AbsoluteStandards.com
Document Identification: Certificate of Analysis Rev 14, Date Issued: 05/30/2019



ABSOLUTE STANDARDS, INC.

ISO - 17034

Understanding the Certified Weight Report

Each Certified Reference Material (CRM) is supported by a Certified Weight Report. Assigned values for concentrations and associated uncertainties are based upon NIST traceable masses & volumes used in production.

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ISO 17034 Accredited
Scope: http://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT

Part # 10009R
Lot # 070716
Shelf Life Description: CLP Priority Pollutant Internal Standards
GC/MS Calibration - 6 components
070721
Expiration Date: Ambient (20 °C)
Recommended Storage: 4000
Nominal Concentration (µg/mL): 822-275872-11
NIST Test ID#: 5E-05 Balance Uncertainty
0.058 Mass Uncertainty

Solvent(s): Methylene chloride
Lot# 78782

Formulated By: Paul Barron
Reviewed By: Pedro L. Rentes

070716
070716

Weight(s) shown below were combined and diluted to (mL): 500.0

Compound	SMW	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight (µg)	Actual Weight (µg)	Actual Conc (µg/mL)	Expanded Uncertainty (µg/mL)	CAS#	MSDS Information (Solvent Safety Info. On Attached pg.)	OSHA PEL (TWA)	LD50
1. 1,4-Dichlorobenzene-d4	118	PR-1845M07287CB1	4000	98	0.2	2.04093	2.04335	4004.7	15.4	2055-02-1	N/A	N/A	or-rat 500mg/kg
2. Naphthalene-d8	223	PR-2339M031612HP1	4000	99	0.2	2.02032	2.02084	4001.0	15.2	1146-85-2	10 ppm (50mg/m3/8h)	N/A	or-rat 400mg/kg
3. Acenaphthene-d10	2	PR-25444	4000	99	0.2	2.02032	2.02245	4004.2	15.2	15067-28-2	N/A	N/A	or-rat 500mg/kg
4. Phenanthrene-d10	248	PR-2305M081711PM1	4000	98	0.2	2.04093	2.04136	4000.8	15.4	1517-25-2	N/A	N/A	N/A
5. Chrysene-d12	92	I-19290	4000	98	0.2	2.04093	2.04159	4001.3	15.4	1719-03-5	N/A	N/A	N/A
6. Perylene-d12	247	PR-24113	4000	98	0.2	2.04093	2.04156	4001.2	15.4	1503-58-3	N/A	N/A	N/A

Run 35, "P10009R L070716 [4000µg/mL in MeCl2]"

Run Length: 40.00 min, 23900 points at 10 points/second.
Created: Sat, Jul 9, 2016 at 1:54:53 PM.
Sampled: Sequence "070716-GC/MS", Method "GC-MS".
Analyzed using Method "GC-MS".

Comments:
GC-MS Analysis by Melissa Siciric
Column ID SPB-5 30 meter x 0.53mm x 1.5um Film Thickness.
Flow rates: Total Flow = 300 mL/min, Helium (carrier) = 0.5 mL, Helium (make-up) = 25 mL.
Hydrogen (detector) = 30 mL, Air (detector) = 300 mL, Oven Temp 1 = 50°C (1 min).
Rise = 10°C/min, Oven Temp 2 = 300°C (14 min). Total Run Time = 40 Minutes. Injector Temp = 250°C.
FID Temp = 300°C, FID Signal = aDaq Channel 1.
Gas Chromatograph = HP 5890, Auto Sampler = HP 7673, Standard Injection = 0.5 µL, Range = 4

Peak No. Name FID RT (min)

1	1,4-Dichlorobenzene-d4	6.34
2	Naphthalene-d8	8.98
3	Acenaphthene-d10	12.97
4	Phenanthrene-d10	16.37
5	Chrysene-d12	22.62
6	Perylene-d12	25.75

Printed: 5/8/2019, 12:55:50 PM

Part # 10009R Lot # 041219 1 of 2

Formulator
Reviewer

Actual
Concentration

Uncertainty
Values

Health &
Safety

3rd Party
Comparison

For More Information, Contact:

StephenArpie@AbsoluteStandards.com

Page 2 of 2



CERTIFIED WEIGHT REPORT

Part Number: **72072**
Lot Number: **101122**
Description: **n-Tetracosane-d50**

Solvent(s): **Methylene chloride**
Lot#: **105345**

<i>Prashant Chauhan</i>		101122
Formulated By:	Prashant Chauhan	DATE
<i>Pedro L. Rentas</i>		101122
Reviewed By:	Pedro L. Rentas	DATE

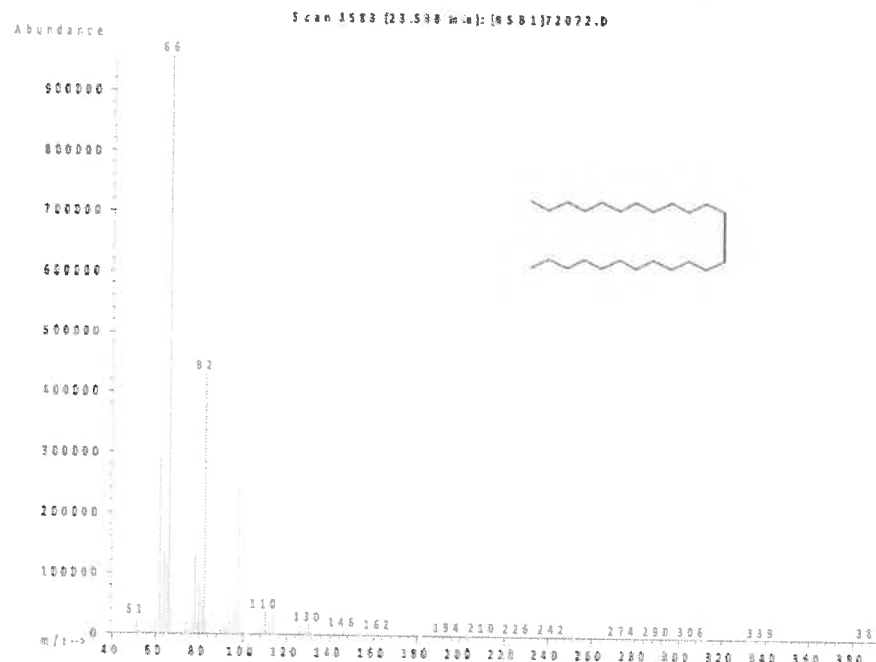
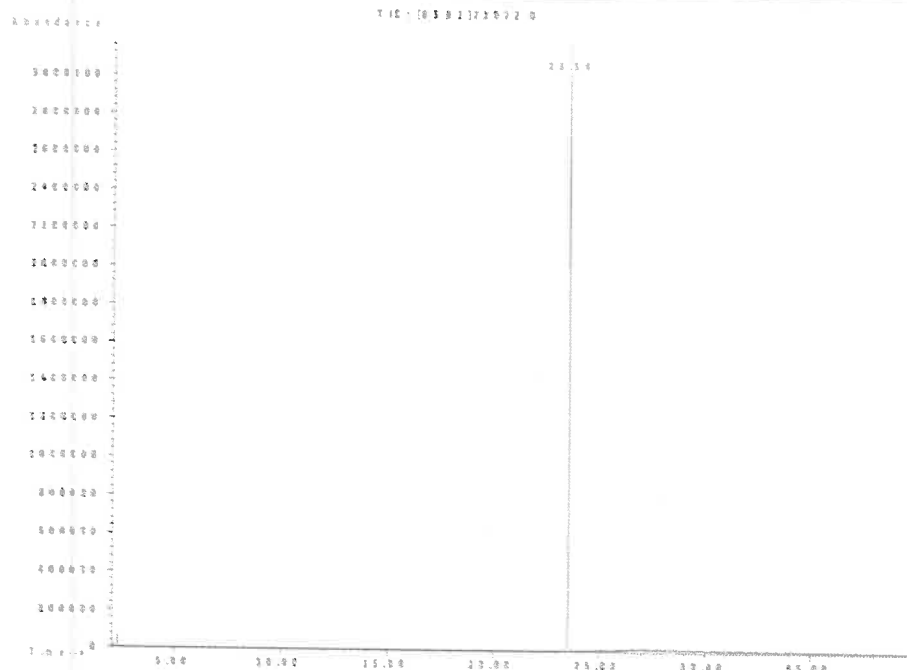
*P13477 } x.p.
↓
P13496 } 07/24/24*

Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UTB**

Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Assay (%)	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.)		
											CAS#	OSHA PEL (TWA)	LD50
1. n-Tetracosane-d50	2072	PR-26606	1000	98.7	0.2	99.0	0.20471	0.20482	1000.6	4.1	16416-32-3	N/A	N/A

Method GC8MSD-3.M: Column:SPB-5 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (9min.), Rate = 10°C/min., Injector B= 250°C, Detector B = 275°C, Split Ratio = 100:1, Scan Rate = 2. Analysis performed by: Candice Warren.



- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

ABSOLUTE STANDARDS, INC.

ISO - 17034



Certificate of Analysis



Certified Reference Material (CRM)

Conformance: The "Certificate of Analysis" is applicable for CRM's, fulfilling the requirements in the current version of: ISO 17034.

Health & Safety: See the attached SDS & Certified Weight Report before use.

Intended Use: This Certified Reference Material (CRM) is intended primarily for use in the characterization of unknowns and the establishment of analyzer or instrument response factors by qualified personnel. Typical instrumental organic assays include: GC & LC, and inorganic assays include: ICP & AA. This product is for laboratory use only.

Characterization Values: In production, gravimetric/volumetric readings are certified to be within $\pm 0.5\%$ of the stated value & are valid between 18 °C & 30 °C. The measured characterization of uncertainty can be found on the Certified Weight Report. All product weighings are performed on an analytical balance that is calibrated to NIST Traceable standard weights & certified by the manufacturer. The volumetric glassware used is Class "A" type & conforms to ASTM E-288 unless otherwise stated. The solvents & compounds used are of the highest practical purity & typically meet or exceed ACS Reagent Grade & ACS Standards Grade specifications. The expanded uncertainty field on Certified Wt. Report represents CRM uncertainty as described in ISO 17034.

Homogeneity: Uncertainties that are due to the analytical procedure(s) are within $\pm 5\%$ unless specifically stated on the Certified Wt. Report.

Verification: Uncertainties that are due to the analytical procedure(s) are within $\pm 5\%$ unless specifically stated on the Certified Wt. Report.

Stability: Uncertainties for short-term stability are determined in accordance with ISO 17034. Long-term stability is determined in accordance with ISO 17034. The shelf life is limited by the stated expiration for each product. Expiration dates and additional technical information can be found on the Certified Weight Report and on the product label.

Uncertainty: UCRM is the expanded uncertainty which utilizes a $K = 2$ (coverage factor of 2), in accordance with ISO 17034 as listed above (Characterization, Homogeneity, Verification, and Stability).

Purity & Identity: Organic solutions are typically formulated from neat materials whose purity & identity have been characterized by GC-MSD & LC-PDA techniques with comparison to a NIST Traceable library of mass spectra when available. Additional characterization techniques may include but are not limited to: refractive index measurements of liquids, melting point measurements of solids, & GC-FID, ECD, PID, ELCD, LC-PDA measurements for purity. Inorganic solutions & neats are typically formulated from materials whose purity & identity have been characterized by ICPMS with comparison to a NIST SRM® when available. Additional characterization techniques may include but are not limited to: titrimetry, and densitometry.

Storage: Sealed ampules and other containers should be stored in the dark and at temperatures indicated on the Certified Weight Report or product label. Certification by Absolute Standards, Inc. is typically valid for 3 years from the date of manufacture. Each product will show its own expiration date as the limit of certification. Certified values are not applicable to opened ampules or for any materials stored in re-sealable containers. Please see the "Certified Weight Report" for specific values and any exceptions.

Usage: Ampules & bottles should be brought to room temperature (18 to 30 °C) before opening. Sonication may be required for high concentration solutions or solutions that may precipitate during storage. After opening, care should be exercised to avoid concentration changes owing to evaporation of the solvent or essential components. We recommend that a suitable re-sealable container be available before opening an ampule to decant the standard for short-term storage and use.

Minimum Sample Size: 0.5 uL for analytical applications.

Legal Notice: Warranty of products are as described when shipped. No warranty as to fitness for any particular application is expressed or implied. Errant shipments and/or quality claims must be made within 10 days of receipt. Liability is limited solely to the replacement of the product or refund of purchase price.

Certifying Officer: Stephen J. Arpie, M.S., Director General

Page 1 of 2



Absolute Standards, Inc. • 44 Rossotto Drive • Hamden, CT 06514
Voice: 800-368-1131 • Fax: 800-410-2577 • eMail: StephenArpie@AbsoluteStandards.com
Document Identification: Certificate of Analysis Rev 14, Date Issued: 05/30/2019



ABSOLUTE STANDARDS, INC.

ISO - 17034



Understanding the Certified Weight Report



Each Certified Reference Material (CRM) is supported by a Certified Weight Report. Assigned values for concentrations and associated uncertainties are based upon NIST traceable masses & volumes used in production.

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ISO 17034 Accredited
Scope: http://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT

Part # 10009R
Lot # 070716
Shelf Life 070716

Part Number: 10009R
Lot Number: 070716
Description: CLP Priority Pollutant Internal Standards
GC/MS Calibration - 6 components
070721
Expiration Date:
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 4000
NIST Test ID#: 822-275872-11
Weight(s) shown below were combined and diluted to (mL): 500.0

Solvent(s): Methylene chloride
Lot# 78782

5E-05 Balance Uncertainty
0.058 Peak Uncertainty

Formulated By: Paul Barron
Reviewed By: Pedro L. Rentes

070716
070716

MSDS Information
(Solvent Safety Info. On Attached pg.)

Compound	SMW	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty (%)	Target Weight (µg)	Actual Weight (µg)	Actual Conc (µg/mL)	Expanded Uncertainty (µg/mL)	CAS#	OSHA PEL (TWA)	LD50
1. 1,4-Dichlorobenzene-d4	118	PR-1845M07287CB1	4000	98	0.2	2.04093	2.04335	4004.7	15.4	2055-02-1	N/A	or-nr 500mg/kg
2. Naphthalene-d8	223	PR-2339M031612HP1	4000	99	0.2	2.02032	2.02084	4001.0	15.2	1146-85-2	10 ppm (50mg/m3/8h)	or-nr 400mg/kg
3. Acenaphthene-d10	2	PR-25444	4000	99	0.2	2.02032	2.02245	4004.2	15.2	15067-28-2	N/A	or-nr 500mg/kg
4. Phenanthrene-d10	248	PR-2305M081711PM1	4000	98	0.2	2.04093	2.04135	4000.8	15.4	1517-25-2	N/A	N/A
5. Chrysene-d12	92	I-19290	4000	98	0.2	2.04093	2.04150	4001.3	15.4	1719-03-5	N/A	N/A
6. Perylene-d12	247	PR-24113	4000	98	0.2	2.04093	2.04155	4001.2	15.4	1503-58-3	N/A	N/A

Run 35, "P10009R L070716 [4000µg/mL in MeCl2]"
Run Length: 40.00 min, 23900 points at 10 points/second.
Created: Sat, Jul 9, 2016 at 1:54:53 PM.
Sampled: Sequence "070716-GC/MS", Method "GC-MS".
Analyzed using Method "GC-MS".

Comments
GC-MS Analysis by Melissa Siciric
Column ID SPB-5 30 meter x 0.53mm x 1.5um Film Thickness.
Flow rates: Total Flow = 300 mL/min, Helium (carrier) = 0.5 mL, Helium (make-up) = 25 mL.
Hydrogen (detector) = 30 mL, Air (detector) = 300 mL, Oven Temp 1 = 50°C (1 min).
Rise = 10°C/min, Oven Temp 2 = 300°C (14 min), Total Run Time = 40 Minutes, Injector Temp = 250°C.
FID Temp = 300°C, FID Signal = aDaq Channel 1.
Gas Chromatograph = HP 5890, Auto Sampler = HP 7673, Standard Injection = 0.5 µL, Range = 4

Peak Data

Peak No.	Name	FID RT (min)
1	1,4-Dichlorobenzene-d4	6.34
2	Naphthalene-d8	8.98
3	Acenaphthene-d10	12.97
4	Phenanthrene-d10	16.37
5	Chrysene-d12	22.62
6	Perylene-d12	25.75

Qualitative Quantitative

3rd Party Comparison

Analyte	Sup/Abs Dev (%)
1,4-Dichlorobenzene-d4	2.55
Naphthalene-d8	2.43
Acenaphthene-d10	2.74
Phenanthrene-d10	0.65
Chrysene-d12	1.93
Perylene-d12	-1.72
Total	-0.55

Printed: 5/8/2019, 12:55:50 PM

For More Information, Contact:

StephenArpie@AbsoluteStandards.com

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Document Identification: Certificate of Analysis Rev 14, Date Issued: 05/30/2019





CERTIFIED WEIGHT REPORT

Part Number: **72072**
Lot Number: **101122**
Description: **n-Tetracosane-d50**

Solvent(s): **Methylene chloride**
Lot#: **105345**

<i>Prashant Chauhan</i>		101122
Formulated By:	Prashant Chauhan	DATE
<i>Pedro L. Rentas</i>		101122
Reviewed By:	Pedro L. Rentas	DATE

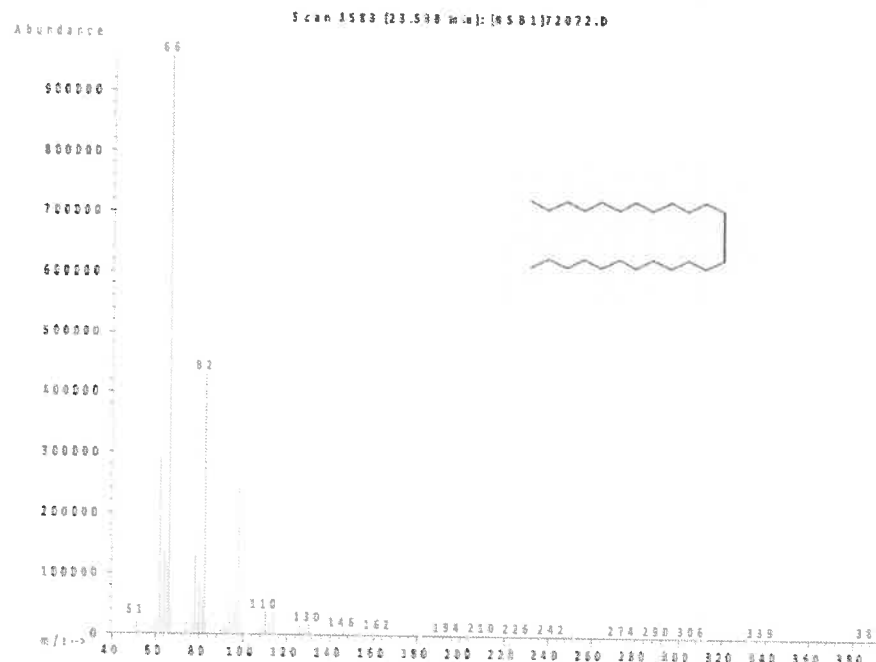
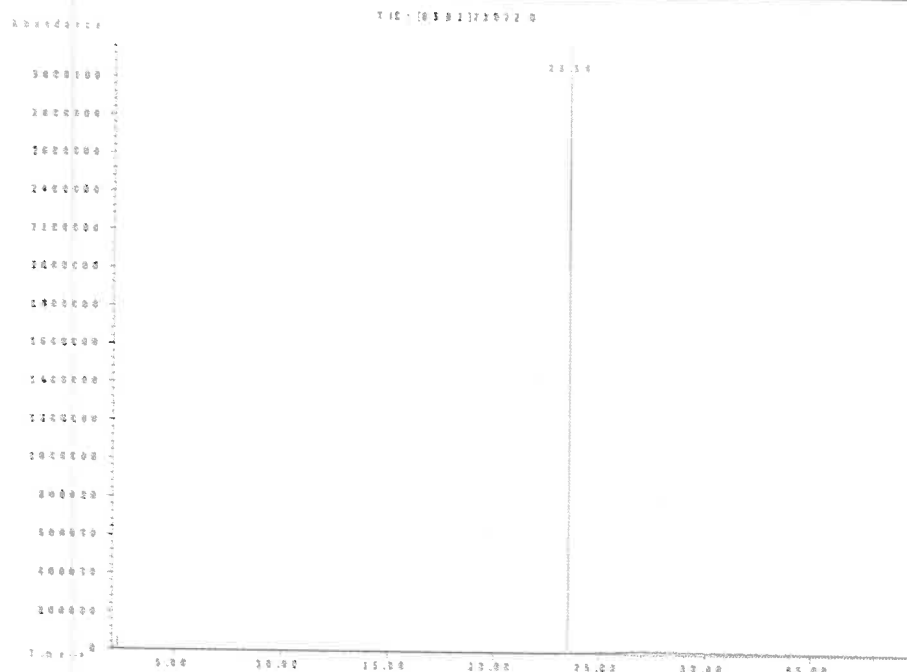
*P13477 } x.p.
↓
P13496 } 07/24/24*

Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UTB**

Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Assay (%)	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.)		
											CAS#	OSHA PEL (TWA)	LD50
1. n-Tetracosane-d50	2072	PR-26606	1000	98.7	0.2	99.0	0.20471	0.20482	1000.6	4.1	16416-32-3	N/A	N/A

Method GC8MSD-3.M: Column:SPB-5 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (9min.), Rate = 10°C/min., Injector B= 250°C, Detector B = 275°C, Split Ratio = 100:1, Scan Rate = 2. Analysis performed by: Candice Warren.



- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).



SHIPPING DOCUMENTS



284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 • Fax (908) 789-8922
www.chemtech.net

ALLIANCE PROJECT NO.

QUOTE NO.

COC Number

Q3439
2045129

CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: AECOM
ADDRESS: 605 3rd Ave
CITY: New York STATE: NY ZIP: 10138
ATTENTION: Robert Forstner
PHONE: 212-377-8721 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: Port Richmond 132
PROJECT NO.: 60693745 LOCATION: Staten Isl
PROJECT MANAGER: Rob Forstner
e-mail: Robert.Forstner@aecom.com
PHONE: 11 FAX:

CLIENT BILLING INFORMATION

BILL TO: AECOM PO#:
ADDRESS: 11
CITY: STATE: ZIP:
ATTENTION: Rob Forstner PHONE: 11

ANALYSIS

DATA TURNAROUND INFORMATION

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): _____ DAYS*
EDD: _____ DAYS*

*TO BE APPROVED BY CHEMTECH

STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS

DATA DELIVERABLE INFORMATION

☐ Level 1 (Results Only) ☐ Level 4 (QC + Full Raw Data)
☐ Level 2 (Results + QC) ☐ NJ Reduced ☐ US EPA CLP
☐ Level 3 (Results + QC) ☐ NYS ASP A ☒ NYS ASP B
+ Raw Data ☐ Other _____
☐ EDD FORMAT

1. 2. 3. 4. 5. 6. 7. 8. 9.
SVOC Pesticides Hg Metals
Corrosivity Light
TPH VOC Flash Point

PRESERVATIVES

COMMENTS

ALLIANCE SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES										← Specify Preservatives A-HCl D-NaOH B-HNO3 E-ICE C-H2SO4 F-OTHER
			COMP	GRAB	DATE	TIME		1	2	3	4	5	6	7	8	9	
1.	PR132-WC1-20281022	S		X	10/22	10:18	9	X	X	X	X	X	X				
2.	PR132-WC2-20281022	A		X	10/22	10:30	7	X	X	X	X	X	X	X			
3.	TB	A			10/22		3										
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:	Conditions of bottles or coolers at receipt:	☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP	3.8 °C
1. <u>Jim Alderson</u>	<u>10/22/25 1pm</u>	<u>[Signature]</u> <u>10-22-25</u>	Comments:		
RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:			
2.					
RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:			
3. <u>[Signature]</u>	<u>10-22-25</u>				
Page ____ of			CLIENT: ☐ Hand Delivered ☐ Other	Shipment Complete ☐ YES ☐ NO	

Laboratory Certification

Certified By	License No.
Connecticut	PH-0830
DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255425
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	TX-C25-00189
Virginia	460312

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q3434	AECO02	Order Date : 10/22/2025 1:40:00 PM	Project Mgr :
Client Name : AECOM		Project Name : AE1-CTY 3.2.Z-PR-DOCK	Report Type : NYS ASP <i>B</i>
Client Contact : Rob Forstner		Receive DateTime : 10/22/2025 2:16:00 PM	EDD Type : EQUIS
Invoice Name : AECOM		Purchase Order :	Hard Copy Date :
Invoice Contact : Rob Forstner			Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q3434-01	PR132-WC1-20251022	Solid	10/22/2025	10:18					
					VOC-TCLVOA-10		8260D		10 Bus. Days
Q3434-02	PR132-WC2-20251022	Water	10/22/2025	10:30					
					VOC-TCLVOA-10		8260D		10 Bus. Days
Q3434-03	TB	Water	10/22/2025	10:00					
					VOC-TCLVOA-10		8260D		10 Bus. Days

Relinquished By :

Date / Time :

[Signature]
10-22-25 1505

Received By :

Date / Time :

[Signature]
10/22/25 15:05

Storage Area : VOA Refridgerator Room

Reg #5
22
Reg #5